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SUMMER OCCURRENCE OF BLUE GROSBEAKS IN MIDDLE TENNESSEE

By Katherine A. Goodpasture

During the past ten or more years field workers in the Nashville area have been watching with interest the increasing occurrence of Blue Grosbeaks (*Giuraca caerulea*) during the summer. Participation in the Breeding-Bird Survey, 1966 and 1967, has stimulated observation over a wider radius and the records deriving from these Surveys begin to fill blank spots in our knowledge of this bird as a breeding species in Middle Tennessee.

I am not aware of an earlier nesting record of Blue Grosbeaks for Tennessee than that of Warriner for McNairy County, 11 June 1945.[1] This location was a few miles north of the Mississippi state line and just west of the Tennessee River. Howell reported the first nest of the species in Knox County in 1951.[2] Especially pertinent to the present discussion is the record of a Blue Grosbeak observed by Ben B. Coffey, Jr., 28 June 1958 near Waynesboro (personal communication).

In the Nashville area of Middle Tennessee Mr. Jim Robbins verbally reported having seen a Blue Grosbeak at Richland Creek near the city limit during mid-summer 1950 and 1951. On 2 July 1952 a male Blue Grosbeak was reported from the South Harpeth Valley at Bedford Creek 20 miles southwest of the city.[3] Mrs. Faitoute watched a singing Blue Grosbeak inside the city, June and July 1962.[4] First evidence of the species breeding in the Nashville area was found 21 July 1962 when adults fed a young bird out of the nest in the same Bedford Creek area as cited above.[5] A year later, 30 June 1963, a nest with 3 eggs was found in the same area.[6] Between 1963 and 1967 no additional local nest has come to light but Mike Bierly observed adults feeding a young bird out of the nest at Radnor Lake, 31 July 1967 (see P. 15). Blue Grosbeaks are reported regularly in spring and irregularly during the summer within 20 miles of Nashville (Castles, Creech, Palmer, Wood, *et al.*). Today, reports of a Blue Grosbeak are no longer a surprise or "automatically questionable" in what is loosely called the Nashville area but the spotty pattern of our field work has led us to assume an equally irregular distribution of grosbeaks.

The Breeding-Bird Survey instituted by the Fish and Wildlife Service in 1966 extended our observations systematically over Middle Tennessee from the Tennessee River to the foothills of the Cumberland Plateau and from Alabama to the Kentucky state line. One survey route ran from Dover in Stewart County eastward; others ran through White House and Bethpage; two in the east ran southward from Bradyville and from Tullahoma; in the western section one route ran through Lewis County; others extended eastward from Collinwood in Wayne County, southward in Giles from Campbellsville; and one through Marshall County; all these in addition to three closer to Nashville in Williamson, Cheatham, and Hickman Counties. The bird population on these 12 routes was surveyed during June 1966 and 1967 by methods conforming to the nation-wide program and it is anticipated they will be surveyed similarly in the future.

Of 11 routes surveyed in Middle Tennessee in 1966 a total of eleven Blue Grosbeaks was reported on three routes (KAG). Five were found on a route running from Collinwood eastward toward Lawrenceburg; five were on a route in Giles County running from Campbellsville almost to the Alabama line and one was reported from near Bethpage northeast of Nashville. Mary Wood has communicated that she saw five grosbeaks on her scouting trip of the Bradyville route, 1966, but did not see any on the day of the survey.

In 1967 Blue Grosbeaks were reported on three of 12 routes. The species was added to two routes in 1967: one bird was reported from Lewis County by George Mayfield, Jr., another from Williamson County by Annella Creech. For the second year five grosbeaks were reported on the Collinwood route (KAG). In addition two grosbeaks were observed on this route that could not be reported on the survey. On the Campbellsville route likewise five grosbeaks were again observed but not a single one was reportable and three Blue Grosbeaks were observed but not reportable in the Bethpage area (KAG). In summary in 1966 eleven Blue Grosbeaks were reported from Middle Tennessee on the Breeding-Bird Survey; five non-reportable birds were observed on one route. In 1967 seven grosbeaks were reported on three Mid-State surveys and 10 additional individuals observed on the routes were not reportable.

DISCUSSION

The above summer records of Blue Grosbeaks in Middle Tennessee deriving from the Breeding-Bird Surveys through two breeding seasons indicate a stable breeding population southwest of Nashville to the Tennessee River and the Alabama line. There also appears to be an established breeding population northeast of Nashville. It is not surprising to find Blue Grosbeaks in Wayne, Lawrence and Giles Counties but to find five grosbeaks on each of two routes in this area on the first Survey was surprising. It is a satisfaction to begin to establish a pattern for this species as a breeding bird as well as to confirm what was reasonable.

By statistical analysis of reports from all over eastern United States, Robbins and Van Velzen projected a map in "The Breeding Bird Survey 1966" which shows Tennessee to be on a critical line along which change in the range and abundance of Blue Grosbeaks may be taking place.[7] Production of this map is an exquisite example of what can be done with a vast volume of data when modern methods of analysis can be applied. For the next few years it will be of interest to watch Middle Tennessee as an area where the Blue Grosbeak is probably not at the present time stabilized as a breeding species.

Mr. Coffey's record of a singing Blue Grosbeak near Waynesboro on 28 June 1958 helps significantly to bridge the gap between Warriner's first nest in McNairy County, 1945, and the Surveys of 1966-1967 which indicate an established breeding population in Wayne, Lawrence and Giles Counties. The Breeding-Bird Surveys cannot look backward to comment on the rate at which the species has moved northward from the Mississippi and Alabama lines but the 1966 and 1967 surveys do set a scale by which change in the range and abundance of Blue Grosbeaks as a breeding species can be measured in 1970, in 1975 or in the year 2000.

REFERENCES

1. Warriner, Benjamin R. Some observations on the Blue Grosbeak. THE MIGRANT. 1945, 16(2): 24-26.
2. Howell, J. C. Nest of the Blue Grosbeak (*Guiraca caerulea*) in Knox County, Tennessee. THE MIGRANT. 1951, 22(3): 44.
3. Goodpasture, Katherine A. The Season, THE MIGRANT. 1951, 22(3); 46.
4. Faitoute, Mrs. Ralph. Blue Grosbeak in Nashville. THE MIGRANT. 1962, 33(3): 52.
5. Goodpasture, Katherine A., Douglass, Larry and Bishop, Earl. Blue Grosbeak with young in the South Harpeth Valley. THE MIGRANT. 1962, 33(4): 72-73.
6. Goodpasture, Katherine A. Blue Grosbeak nest in Basin Spring Area. THE MIGRANT. 1964, 35(1): 21.
7. Robbins, Chandler S. and Van Velzen, Willet T. The Breeding Bird Survey 1966. Fish and Wildlife Service. Special Scientific Report. Wildlife No. 102. Washington, D. C. 1967.

3407 Hopkins Lane, Nashville 37215.

NEW STAFF MEMBER

The Editorial Staff is pleased to introduce a new member, Mr. Jon E. DeVore. He has been an active member of the Chattanooga Chapter of T.O.S. in recent years and will assume the duties of State Count Compiler. Mr. DeVore will organize the state "*Christmas Season Bird Counts*" and the "*Spring Field Days.*" His responsibilities will include the editing and compiling of individual chapter counts.

Send your "*Spring Field Days*" counts for 1968 to:

MR. JON DEVORE, 4922 Sarasota Drive,
Hixson, Tennessee 37343.

THE 1967 BREEDING BIRD SURVEYS

WEST TENNESSEE — By Lula C. Coffey

Twelve surveys were made in West Tennessee. They are designated as: Tiptonville, Pawpaw, Moscow, Brownsville, Tibbs, Whiteville, Big Sandy, Mansfield, Sweet Lips, Silerton, Trenton, and Humboldt. A total of 77 species were listed. 18 species were found on all routes. These, with total numbers, were: Bobwhite, 586; Mourning Dove, 679; Red-bellied Woodpecker, 73; Barn Swallow, 262; Blue Jay, 305; Common Crow, 201; Mockingbird, 462; Brown Thrasher, 69; Loggerhead Shrike, 38; Starling, 336; Yellowthroat, 234; Yellow-breasted Chat, 122; House Sparrow, 1261 (563 on one route); Eastern Meadowlark, 491; Red-winged Blackbird, 700; Orchard Oriole, 65; Common Grackle, 781; Cardinal, 566; Indigo Bunting, 333.

The following was seen on one survey only: Common Egret, 1 (Humboldt); Mallard, 6 (Tiptonville); Wood Duck, 1 (Tiptonville); Red-shouldered Hawk, 1 (Moscow); Sparrow Hawk, 1 (Tibbs); Least Tern, 1 (Pawpaw); Nighthawk, 3 (Humboldt); Warbling Vireo, 1 (Tiptonville); Swainson's Warbler, 1 (Whiteville).

The White-eyed Vireo was found on 11 surveys, a total of 38. Red-eyed Vireo on 5 routes, total 9. Yellow-throated Vireo was found on only two routes, total 4.

In addition to Yellowthroat, Yellow-breasted Chat and Swainson's Warbler, the only other warbler listed was Prothonotary Warbler, 8 (5 routes).

Blue Grosbeaks were of special interest. A total of 10 were seen: Whiteville, 2 (1 stop); Big Sandy, 2 (2 stops); Mansfield, 1, and Humboldt, 5 (5 stops).

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MIDDLE TENNESSEE — By Katherine Goodpasture

Between 4 June and 23 June 1967 Middle Tennessee Breeding-Bird Surveyors enthusiastically tackled their routes for the second year. Sue Bell, Mike Bierly, Annella Creech, John Ellis, George Mayfield, Mary Wood and Katherine Goodpasture assisted by William Bell, Jr., Ruth Castles, Larry Copes, Milbry Dugger, Adele Elam, Evelyn Ellis, Erlene Elmore, William and Mary L. Fuqua, Henrietta McCrary, Harry Monk, Fannie Murphy, and David Patterson worked diligently to record a statistically significant sample of the breeding bird population in Middle Tennessee from Alabama to the Kentucky state line between 86°-88° longitude. Routes are established in Wayne, Lawrence, Giles, Marshall, Williamson, Davidson and Cheatham Counties; in Hickam, Lewis, Stewart, Sumner, Robertson, Cannon and Coffee Counties. This scatter of routes is well distributed over Middle Tennessee. The routes are run on roads and in directions designated by chance so that the survey represents as nearly as possible an unbiased sample of the breeding bird population.

In general the weather was open and favorable. One survey was hindered somewhat by heavy fog in the early morning and by intermittent light showers during the last part of the survey period. One pocket of terrain on this route which gave records of 3 Whip-poor-wills and 2 Chuck-will's-widows in 1966 did not yield a single cluck from a single goatsucker under the weight of heavy fog, 1967.

A total of 11,363 individuals of 89 species was reported. This was an increase of 2,374 individuals and 8 species over the 1966 surveys. In 1967 twelve species were reported from only one route: 3 Wood Ducks, 1 Great Blue Heron, 1 Turkey, 1 Cooper's Hawk and 1 Red-shouldered Hawk, 2 Chuck-will's-widows, 1 House Wren, 1 Worm-eating Warbler, 1 Ovenbird, 1 American Redstart, 1 Bachman's Sparrow and 1 Lark Sparrow.

The twenty-five species reported on each of the 12 routes may be considered well distributed over Middle Tennessee as are 11 species found on all save one. Species found on all routes are: Yellow-billed Cuckoo, Chimney Swift, Red-bellied Woodpecker, Eastern Phoebe, Eastern Wood Pewee, Barn Swallow, Blue Jay, Common Crow, Tufted Titmouse, Mockingbird, Catbird, Brown Thrasher, Bluebird, Loggerhead Shrike, Starling, White-eyed Vireo, Kentucky Warbler, Eastern Meadowlark, Red-winged Blackbird, Common Grackle, Summer Tanager, Cardinal, Indigo Bunting, Chipping Sparrow and Field Sparrow. Species found on all routes except one are: Mourning Dove, Eastern Kingbird, Great Crested Flycatcher, Carolina Wren, Yellowthroat, Yellow-breasted Chat, House Sparrow, Orchard Oriole, Brown-headed Cowbird, American Goldfinch, and Rufous-sided Towhee.

Species often showing a somewhat spotty distribution are Whip-poor-will found on 6 routes, Blue Grosbeak on 3, Dickcissel on 6 and Grasshopper Sparrow on 4 routes. It is interesting that only 1 House Wren was reported (Marshall County); Bewick's Wrens were reported on 9 routes and Carolina Wrens on eleven.

Sixteen species of warblers were reported from Middle Tennessee: Black-and-white Warbler, Prothonotary Warbler, Worm-eating Warbler, Blue-winged Warbler, Parula Warbler, Yellow Warbler, Cerulean Warbler, Yellow-throated Warbler, Prairie Warbler, Ovenbird, Louisiana Waterthrush, Kentucky Warbler, Yellowthroat, Yellow-breasted Chat, Hooded Warbler and American Redstart. Incidentally all these Warblers have been reported breeding in the small Basin Spring area through the past years.

It is not at the present time significant that 7 species, Great Blue Heron, Cooper's Hawk and Broad-winged Hawks, House Wren, Ovenbird and Baltimore Oriole, were reported in 1967 but not in 1966, or conversely that Black-crowned Night Heron, Barred Owl, Horned Lark and White-breasted Nuthatch were reported in 1966 and not in 1967. The foregoing paragraphs in general treat distribution of various species but not their abundance. One chief objective of the whole program is to watch for any change in the abundance of any species that may appear as years go by.

A review such as this is more of interest than significance at the present time but it indicates in small measure the volume of information being gathered and stored for meaningful analysis in the future. I would also point out that this information from Middle Tennessee fits into a mosaic of data from all over the United States. I want to express appreciation not only for the work done by the surveying crew in Middle Tennessee but also to the groups in East and West Tennessee who have contributed to this fascinating program of bird study so well organized by Mr. Chandler Robbins and Mr. W. T. Van Velzen of the Fish and Wildlife Service.

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EAST TENNESSEE — By J. C. Howell

In 1966, the Migratory Bird Population Station, a unit of the U. S. Bureau of Sport Fisheries and Wildlife, organized and administered The Breeding Bird Survey. The chief aim of this survey was to gather information which would make it possible to measure population changes of breeding birds. Students of birds in 26 eastern states and four Canadian provinces participated in this project.

Tennessee ornithologists took part in the bird counts made during this first year and were asked to conduct counts on 42 routes. Eighteen of these 42 routes lie in the eastern section of the state. In 1966, counts were completed along 15 of the 18 routes. In 1967, counts were taken on all of the 18 routes. The data gathered during the counts made in these two years can be used to measure population levels in this part of the state and also to compare this region with other regions of the state and continent.

This article is concerned with the 18 routes lying in eastern Tennessee. It was written to present some of the information obtained during these counts. The counts are used to indicate differences in population level between the two years, the routes, the observers and some of the species.

Differences in observers were often accompanied by pronounced differences in the number of individuals counted from the same route. Counts were made over five routes by different observers in 1966 and 1967. On one route the difference between the totals of individuals counted by the two observers was 55 per cent. The percentage differences between the totals counted by the two observers on each of the five routes ranged from five to fifty-five and the median was twenty-two. These differences seem not to have been due to differences between the two years as is indicated below in the comparison between the two years.

Differences in the number of individuals counted in the years 1966 and 1967 seem to have been less pronounced than those due to differences between observers. Counts were made from ten of the 18 eastern routes in Tennessee by the same observer in both years. The highest per cent of difference between the two counts in these ten instances was 16. The range in the per cents of difference was from less than one to sixteen and the median was seven-and-a-half.

Different routes had special characteristics which resulted in counts that were unlike those of any other route even when the same observer made the counts. The 18 counts provide only limited information on the effect of different routes on the size of the counts obtained. To compare differences between routes it is desirable to have counts from different routes made by the same observer. J. M. Campbell counted individuals from routes T32 and T34 in both years. In 1966, route T34 had 24 per cent more individuals than T32 and in 1967, T34 had 18 per cent more. In both years I counted individuals from routes T37 and T39. In 1966, T37 had seven per cent more than T39 and in 1967, T37 had 21 per cent more.

Differences in the number of individuals counted vary between species as well as between routes, observers, and years. Analyzing these differences requires that the counts from which the data are derived be as similar as possible. In 1967, there were 18 counts available for comparison, Not all of these counts were suitable for comparison with those of 1966. Three of the 1967 counts were made from routes for which no counts were obtained in 1966, and the counts from five routes were made by different observers in 1966 and 1967. These eight routes were considered unsuited to a study of the variations in numbers in individuals between the two years. All 18 counts can be used in comparisons of counts from larger areas where differences between observers will tend to balance one another.

Counts from 10 of the 18 routes in eastern Tennessee were conducted by the same observer in 1966 and 1967, and they form the basis for the comparisons which follow. The numbers of these 10 routes are T25, T27, T28, T32, T33, T34, T37, T41, and T42. In 1966, a total of 8,069 individuals belonging to 91 species was counted from these 10 routes. In 1967, the totals were 8,062 individuals and 99 species. The difference in the number of individuals counted between the two years seems too small to be significant. The increase in the number of species recorded in 1967 is probably the result of an increase in the ability of the observers to recognize the unusual species by their songs.

Table I compares the 20 species for which the highest number of individuals was counted in 1966 and 1967. The total numbers of individuals counted of these 20 species during each year is virtually identical. This seems to indicate that the capacity to support bird populations was the same in both years in the areas where counts were made. Despite the similarity between the two years when all or a group of species are considered, an examination of particular species shows that most of them differed in the numbers observed in the two years. Two of the 20 species included in the 1966 list, the Red-eyed Vireo and the Yellowthroat, were counted less often in 1967 than two other species, the Chipping Sparrow and the Rufous-sided Towhee.

In 1966, more Starlings were counted than any other species, although Common Grackles were reported almost as often. In 1967, the number of Starlings counted dropped by 28 per cent, while the number of Common Grackles increased by seven per cent. In 1967, fewer Starlings were observed on eight of the ten routes indicating that the decrease was general over the region as well as being pronounced in extent. The underlying factors responsible for this decline are perhaps numerous and are unstudied. Should the Starling continue to decline in this region it is reasonable to suppose that an increase in competing native species might result. Certain species which are frequently associated with Starlings and might be influenced by its decrease showed population increases in 1967. These include the Common Grackle, Eastern Meadowlark, House Sparrow, Eastern Bluebird and Yellow-shafted Flicker.

Another species in which there occurred a marked decline in the number of individuals counted in 1967 was the Chimney Swift. In this species the counts were lower on eight of the ten routes.

The number of Red-eyed Vireos counted dropped by 23 per cent and lower counts were made on eight of the nine routes on which the species was present.

In the following species listed in Table I the number of individuals counted increased in 1967 by more than 10 per cent and increases were noted on at least two-thirds of the routes on which they were present: Eastern Meadowlark, Mockingbird, Field Sparrow, Barn Swallow and Robin.

A few species not appearing in Table I and one group of species underwent changes during these two years which seem to merit comment. Yellow-shafted Flicker numbers increased from 36 to 65 and on seven of the eight routes on which a change occurred. Rough-winged Swallows increased from 12 to 35

TABLE 1

TWENTY MOST FREQUENTLY COUNTED BIRD SPECIES IN 1966 AND 1967 RANKED BY TOTALS OBTAINED ON TEN ROUTES IN EASTERN TENNESSEE.

1966				*1967*		
Rank	*Name*	*Total*	*% of Change**	*Rank*	*Name*	*Total*
1	Starling	894	—28	1	C. Grackle	923
2	C. Grackle	866	+7	2	Starling	640
3	I. Bunting	362	+11	3	E. Meadowlark	404
4	E. Meadowlark	353	+14	4	I. Bunting	401
5	Cardinal	333	+12	5	Cardinal	373
6	C. Crow	329	—1	6	House Sparrow	332
7	House Sparrow	285	+16	7	C. Crow	326
8	C. Swift	267	—40	8	Mockingbird	276
9	Bobwhite	261	—1	9	Bobwhite	259
10	Mockingbird	248	+11	10	Field Sparrow	247
11	Field Sparrow	209	+18	11	Barn Swallow	239
12	Y.-b. Chat	196	—12	12	M. Dove	218
13	R.-w. Blackbird	195	—18	13	Blue Jay	181
14	Barn Swallow	192	+24	14	Y.-b. Chat	173
15	M. Dove	183	+19	15	Robin	171
16	Blue Jay	167	+8	16	C. Swift	161
17	Wood Thruh	144	+2	17	R.-w. Blackbird	159
18	R.-e. Vireo	137	—23	18	Wood Thrush	147
19	Robin	132	+30	19	Chipping Sparrow	132
20	Yellowthroat	131	—9	20	R.-s. Towhee	121
		5,884				5,883

*The per cent of change column refers to the species in the order of the 1966 list and indicates the gain or loss in per cent of the 1966 total which occurred in 1967.

and on four of six routes. Orchard Orioles increased from 53 to 76 and on five of seven routes. A striking decrease occurred in the group of warbler species among which 16 of the 21 species pemitting comparisons between the two years showed a decrease. Among the warblers only the Kentucky Warbler showed an increase that might be significant. Its number increased from 28 to 40 and increases occurred on five of seven routes.

This report could not have been prepared without the cooperation of the observers responsible for making the counts in this area. Also, I am indebted to the Tennessee Breeding Bird Survey Coordinator, Dr. Katherine Goodpasture, and to C. S. Robbins and W. T. Van Velzen of the U. S. D. I. Migratory Bird Population Station for making information available to me. The 1967 cooperators and the routes from which they made counts are as follows: F. J. Alsop, T26; J. K. Burbonk, T31; J. M. Campbell, T32 and T34; K. H. Dubke, T29, T35, and T36; Mrs. W. L. Fenn, T27; T. W. Finucane, T42; M. Grigsby, T38; J. C. Howell, T37, T39, and T40; W. J. Jones, T25; Mrs. W. R. Nevius, T41; Mrs. M. Swindell, T33; and Mrs. A. H. West, T28 and T30.

An excellent report summarizing much of the information obtained in the counts made during the first year entitled "*The Breeding Bird Survey 1966*," Special Scientific Report—Wildlife No. 102, U. S. D. I., was prepared by C. S. Robbins and W. T. Van Velzen. It is based on counts made from 585 routes located in 26 eastern states and four Canadian provinces. This report provides remarkably detailed information on the distribution and relative abundance of many species of birds. For certain species maps indicate its relative abundance in the area included in the 1966 survey. Future plans include an extension of area covered to include all of the contiguous states.

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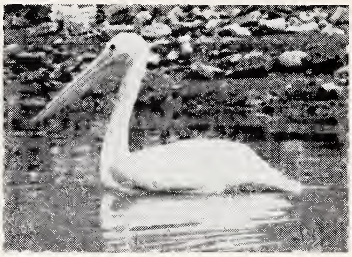
ROUND TABLE NOTES

WHITE PELICAN IN EAST TENNESSEE—At the Knoxville Chapter, TOS meeting on 4 Oct. 1967, Mr. Bill Williams of Maryville reported a White Pelican (*Pelicanus erythrorhynchos*) had appeared on a farm pond belonging to a Dr. Ramsey in Blount County, Tennessee, between Friendsville and Louisville. Several members of Knoxville Chapter, TOS made visits to see the bird.



On Friday, 20 October, at 4:30 p.m. a call was received by this writer from Mrs. James DuBose, owner of Andersonville Boat Dock which is just over the Anderson-Union County line in Union County on State Highway No. 61 north of Norris; she called to say a very large white bird had arrived in the harbor there at 2:30 p.m. and they could not identify it. We went immediately to the boat dock and discovered a White Pelican standing on the shoreline across the harbor preening. Gordon Hall and Dr. Frank Holland (game biologists with TVA's Fish and Game Section) arrived shortly and had with them a B&L 60-power scope. It permitted me to approach within three hundred yards then without any show of alarm, stepped into the water and slowly swam away. It swam to a point closer to the boat dock and again got out of the water. The next day Mr. Hall and another TVA employee returned to the boat dock and by boat approached the bird close enough to secure excellent pictures and a few colored slides. The pelican never exhibited any alarm or fright of people—permitting boats and people to approach quite close.

The bird remained in their area until Sunday, 5 November, when it left at 8:30 a.m. and has not been seen since. Saturday, 4 November, had been quite cold in this area and some sections near Norris had snow flurries and gale winds early that morning.

MRS. EARL F. OLSON, Norris 37828.

LAUGHING GULL AT CHATTANOOGA—While in the course of regular field work on the morning of 25 March 1967 the writer identified what is believed to have been a Laughing Gull (*Larus atricilla*). Location of the sighting was approximately one mile above Chickamauga Dam, on a sandbar adjacent to the south shore of Lake Chickamauga. Due to the water level being down, an area approximately twenty-five feet long by twelve feet wide was exposed. This spot has in the past been frequented not only by gulls, but also ducks and occasionally shorebirds. The small island is about forty yards from the shore and accessible only by boat. On the morning of the sighting the weather was clear, with widely scattered clouds to the west. The temperature was 49°F and thre was a slight breeze coming from the west. Light conditions all morning were excellent.

The bird itself was first noted, through 7x35 binoculars, resting among nine Ring-billed Gulls (*Larus delawarensis*). At first it was thought the bird was a Bonaparte's Gull (*Larus philadelphia*), which occurs here frequently in the winter and spring months. But the bird's size, being equal to that of the Ring-billed Gulls, gave rise to question that assumption. The bird was then brought under observation with 20x and 30x spotting scope. It was immediately noted that the legs were a deep crimson red in color. The bill color was also a distinct crimson red color, but somewhat lighter than the legs. The bill color, being red, eliminated the possibility of the bird being a Bonaparte's Gull as that species has a black bill in all plumages. By this time the bird had been under observation for fifteen minutes and had not moved except to raise its head. It was decided at this time to try to "flush" the bird so a view could be had of its back. After throwing several rocks into the water three of the Ring-billed Gulls flew away and the remaining birds became restless, moving around and raising their wings as if ready to fly. On two occasions the bird under observation extended its wings outward and above its body. It was noted that the mantle was a slate gray color, being continuous to the black wing tips. This color pattern is distinctly that of the Laughing Gull and is different from the nearly identical Franklin's Gull (*Larus pipixcan*) which has a white bar separating the gray mantle from the black wing tips.

Due to the importance of this record, Mr. Kenneth Dubke and Mr. Roy Evenson were contacted so they might confirm the record. Due to intervening circumstances they were unable to go to the area until the morning of the 27th. By some form of luck the bird was still there. They too noted the red color of the bill, the deeper red color of the legs, and the size in comparison with the Ring-billed Gulls. They were, however, unable to flush the bird and observe the color of the mantle and the wing tips. They could note, though, that the back was a slate gray, even with the wings folded in.

This sighting represents the first Chattanooga area record for this species. The bird was observed for approximately one hour by the writer on the morning of the 25th and approximately one hour by Mr. Dubke and Mr. Evenson on the morning of the 27th.

JON E. DEVORE, 4922 Sarasota Drive, Hixson 37343.

CHICKADEES HATCH AND RAISE A BLUEBIRD—At my place near Brentwood, Tenn., I have two bluebird boxes. One on a fence post near the house, the other on a post at the garden. On 4 March 1967, I noticed a pair of Eastern Bluebirds (*Sialia sialis*) going in and out of the box at the garden. By 17 March there was nesting material in this box. However, on 30 March I was surprised to find two bluebird eggs in the other box that is near the house. When checking this box later I thought that the eggs had disappeared, but, on close inspection, found them under newer nesting material. Further observations showed a pair of Carolina Chickadees (*Parus carolinensis*) both going in and out of the box and chasing the pair of bluebirds away! By 11 April there were the two bluebird eggs, plus three chickadee eggs in a nicely made nest in the box. Brooding must have started immediately because on 22 April one bluebird and the three chickadee eggs hatched. Later, the second bluebird egg proved to be addled. The chickadees faithfully fed their three babies and the much larger bluebird youngster. All four thrived, and I last saw them in the nest on 5 May. On 7 May I returned after a weekend away and found the box empty. Afterward, I saw parent chickadees feeding a family of three youngsters many times, but never saw a young bluebird with them. The adult bluebirds nested in the other box and raised four young that left the nest 12 May.

FANNY MURPHY, Route 2, Brentwood 37027.

UNUSUAL BEHAVIOR OF A YELLOW-CROWNED NIGHT HERON—On 11 July 1967, the writer saw an immature Yellow-crowned Night Heron (*Nyctanassa violaccea*) catch a five-inch Israeli Carp in water that he knew to be fully 10 feet in depth (by previous drainings) and fly with it about 400 feet to a perch.

For the past three summers Joe Bush has both sold and used the Israeli Carp at Bush Lake, as they seem to eat only aquatic plants they have proved highly beneficial in keeping fishing lakes clean. During late June and early July, the writer several times saw odd schools of these fish in the large lake. The schools seemed to be compact surface masses of 5 to 6 inch fish, slowly swimming as a unit 18 to 24 inches wide and 5 to 7 feet in length. The fish are so tightly packed that many would be pushed far enough above the surface for an inch of their backs and sides to show. It seems logical that the caught fish must have been from such a school.

About 10:30 a.m. the writer was watching a Black Tern through 7 x 50 binoculars as it flew about the lake. As it neared the center his attention was attracted to a large brown bird that seemed to be hovering for an instant just over the surface, then a small splash. The bird flew just above the water directly toward the car. When nearly 40 feet away, it perched about four feet above the water on a fallen willow tree. It held an Israeli Carp (that seemed about five inches long) crossways in its bill. It remained in a frozen position for a couple of minutes as the writer studied the bright markings of the fish and the plumage of an immature Yellow-crowned Night Heron.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

VERMILION FLYCATCHER AT REELFOOT—27 December 1967, Clarence McCollum and I saw a Vermilion Flycatcher (*Pyrocephalus rubinus*) at the Long Point boat house on Reelfoot National Wildlife Refuge.

After studying the picture and description in Peterson's Field Guide, I am certain of the identification. The bird was an adult male. The flaming red head and underparts and the dark wings were identical to those shown in the field guide.

The flycatcher would perch upon the rudder rod of one of the boats and then fly and hover over the water just inside the boathouse and pick insects off the water surface. The water surface outside the boat house was frozen. The bird was quite unwary, allowing me to approach to within about 10 feet, so I was able to get a good look at it. We were in and around the boat house for about half an hour and the flycatcher was still there when we left.

The Vermilion Flycatcher has been observed before at Reelfood Lake. Arlo Smith reported an observation 15 October 1961 (THE MIGRANT 36-1, 1965). John DeLime and Walden Fickle also observed one near the south end of Reelfoot Lake that same fall.

GUY E. HOGG, Reelfoot National Wildlife Refuge, Samburg.

RED PHALAROPES NEAR CHATTANOOGA—On 12 December 1967 at the Savannah Bay area of Chickmauga Lake I observed two Red Phalaropes (*Phalaropus fulicarius*) in definitive basic plumage. When first located at 1:00 p.m. the sky was overcast, but before leaving at 2:15 p.m. it had broken somewhat allowing the sun to shine. The winter sun was to the rear and low in the sky with the viewing distance generally 100 to 150 yards through the 35x scope.

Shortly after being found, one of the birds stretched its wings revealing a white stripe and lack of a white rump. This ruled out a Wilson's Phalarope (*Steganopus tricolor*). The remainder of the time was occupied in an attempt to separate them between the Red and Northern (*Lobipes lobatus*) species. They were exceedingly active as they would spin and feed. The bills appeared black and more blunt than needle-like. Once, when the sun broke through, one of the birds was feeding out of the water and on the mud. It's legs appeared similar in color to a nearby Least Sandpiper's (*Erolia minutilla*). During the entire time under observation there was nothing to hint these birds had a streaked back as one would expect from a Northern Phalarope.

That night a thorough search was made in all available books to ascertain the identification. The plates by Robert Verity Clem and species accounts by Ralph S. Palmer in *The Shorebirds of North America* (The Viking Press, Inc., New York, 1967) further confirmed my observation of Red Phalaropes.

Jon DeVore was notified and found the birds the following day. They were in the same general area and at a much more convenient location for viewing. He was able to approach them to only 15-20 feet and leisurely study their plumage for forty-five minutes with good light through his 20x scope. DeVore concurred with my observations, however, he was never able to view the legs or extended wings.

KENNETH H. DUBKE, 3302 Navajo Drive, Chattanooga 37411.

WHISTLING SWANS IN KNOX COUNTY—On 9 December 1967, 10:15 A.M. I was walking down a road at the University of Tennessee Plant Science Farm toward Fort Loudon Lake, which was about 150 yards from me, when I saw four large white birds coming in low on the near side of the lake.

I approached within 100 yards of the shore where I could clearly see the birds, which were 50 yards out on the lake. I identified the four birds with a 50X telescope. They were adult Whistling Swans (*Olor columbianus*). The bill was not knobbed or orange as that of the Mute Swan (*Cygnus olor*), but black. I could not see a yellow spot on the lores, as the Whistling Swan sometimes has. The Whistling Swans were in shallow water near stumps by a sandbar (the river was low). They were not active, but stayed in the same place, preening their feathers and resting.

I watched the swans for one hour and a half until noon. Returning home, I called Paul Pardue, who left for the Plant Science Farm immediately and saw the swans. Dr. J. C. Howell and Mrs. E. E. Overton also saw the birds and verified my identification. The birds were not observed further in Knoxville, but Kenneth Dubke of Chattanooga observed four Whistling Swans on the Hiwassee River at Candies Creek on 12-13 Dec. and Bill Allen, Game and Fish Commission waterfowl biologist, saw four swans fly over Hiwassee Island Waterfowl Refuge on 16 Dec.

Between 1911 and 1959 there have been ten reported sightings of the Whistling Swan in Tennessee (THE MIGRANT, 30:56, 1959 and *Wilson Bulletin*, 41:97, 1929), including two birds shot near Knoxville on the Little Tennessee River on 8 Dec. 1926. Normally Whistling Swans migrate along the coastal states and winter from Massachusetts to North Carolina.

CHRIS Mc MILLAN, 2761 Lindsay Place, Knoxville 37919.

(EDITOR'S NOTE: The Basham-Halverson party observed six birds at Wood's Hole near Tullahoma on 3 January 1964, THE MIGRANT 35:16, 1964.)

TWO ALBINO ICTERIDS COLLECTED FROM NORTHEASTERN ARKANSAS—Plumage aberrations are fairly common among icterids and have attracted the attention of several previous observers. Detailed studies have been made by Mueller and Hutt (1941), Nero (1954), and Whitaker (1960). Deane (1876) wrote that the most interesting and striking cases of albinism are found among the *Icteridae* and *Corvidae.* Edson (1928) records an unusual flock of Brewer's Blackbirds (*Euphagus cyanocephalus*) with a high incidence of plumage aberrations o fwhich perhaps more than 40 per cent of the flock showed incomplete albinism. Albinism in the Common Grackle (*Quiscalus quscula*) was reported by Wilson (1930) and there is one record reported in the literature of an albino Brown-headed Cowbird (*Molothrus ater*) (Robinson, 1888). Numerous records of icterids with various feather aberrations have been reported from sight records and some specimens with various feather aberrations occur in various museums in this country.

Two albino iceterids were collected southwest of Jonesboro near Gibson Switch of Craighead County, Arkansas. The first specimen, a Common Grackle, was taken from a flock of Common Grackles in November of 1963. A second albino Common Grackle occurred. This specimen was collected by Robert Lowery 11 December 1966. A third Common Grackle with one white feather in the rectrices was observed by the writer near Cash, Arkansas in the fall of 1964. The cowbird specimen is an incomplete albino whereas the Common Grackle collected is a complete albino. Incomplete albinism was defined by Nero (1954) as a condition in which the eyes, skin, or feathers are affected, but not all three.

The measurements of the first year Brown-headed Cowbird are total length 19 cm; bill (chord of culmen from base) measured 2 cm; tail length 6.3 cm; tarsus length 2.5 cm; and the length from the bend of the wing to the tip 10 centimeters. The head and neck are light orange-buff. Wing coverts, secondaries, and primaries are edged with buff. The remaining feathers of the body are white. The eyes, bill and tarsus are pigmented. This specimen has been placed in the Arkansas State University Museum as No. 225.

The Common Grackle measurements are as follows: total length 29 cm; bill (chord of culmen from base) 2.8 cm; tail 11 cm; tarsus length 4 cm; and the length from the bend of the wing to the tip is 13.7 centimeters. This bird is a complete albino and has been mounted and placed in the albino case in the Arkansas State University museum.

CITED LITERATURE

Dean, R. 1876. Albinism and melanism among North American birds. Bull. Nuttal. Ornith. Club, 1:20-24.

Edson, J. M. 1928. An epidemic of albinism. Auk, 45: 377-378.

Mueller, C. D. and F. B. Hutt. 1941. Genetics of the fowl; sex-linked, imperfect albinism. Jour. Hered., 32: 71-80.

Nero, R. W. 1954. Plumage aberration of the redwing (*Agelaius phoeniceus*), Auk, 71: 137-155.

Robinson, W. 1888. Notes on some albino birds presented to the U.S. Natl. Mus., 11: 413-416.

Whitaker, John. 1960. The basis of color dilution in an albinistic blue jay. Auk, 77:84.

Wilson, E. S. 1930. Interesting case of albinism. Auk, 47: 419.

EARL L. HANEBRINK, Arkansas State University, State University, Arkansas.

BLUE GROSBEAK WITH YOUNG IN NASHVILLE—At dusk on 31 July 1967, I saw a silhouette of what I suspected was a Blue Grosbeak (*Guiraca caerulea*) sitting on a wire. The location was on Otter Creek Road between Radnor Lake and Granny White Pike. Soon, another bird of the same size came and joined the one on the wire and then they flew off. The next day I confirmed my suspicions and saw in good light a singing male and a female grosbeak. On 2 August Amelia Laskey, Katherine Goodpasture, and I found the pair of grosbeaks feeding a partially grown, begging young grosbeak. These facts represent the closest nesting of the Blue Grosbeak to the Nashville area. Goodpasture had two previous nesting records in the South Harpeth Valley (THE MIGRANT 33: 72, 1962 and 35: 21, 1964).

Erline Elmore on 17 August saw four birds, three of them brown and one blue. When the young grosbeak was first observed on 2 August it was thought that there were two young birds involved. This observation by Elmore might verify our suspicions. The birds were last seen by Mary Wood on 29 August at which time she saw three birds.

MICHAEL LEE BIERLY, 3826 Bedford Avenue, Nashville 37215.

LOUISIANA HERON AND GLOSSY IBIS AT CHATTANOOGA—On 8 May 1967, I closely observed a single Louisiana Heron (*Hydranassa tricolor*) and two Glossy Ibis (*Plegadis falcinellus*) as they casuually fed and preened their feathers at Amnicola Marsh. Three days of hard rain and southerly winds of 14 to 24 mph probably blew them in. Very leisurely views were made under broken clouds with both 7x50 binoculars and a 35x telescope. Apparently they were tired when first found in the morning as approaches of fifty yards and much less were easy to make. They were still present in the evening when I returned with Jack Wagner and his son Mark. The Louisiana Heron appeared to be in good plumage with it's white belly very conspicuous. This is the same individual reported in THE MIGRANT, 38: 50, 1967.

During the following two days Jon DeVore could only locate the ibis.

With the excellent opportunities afforded there was no reason to believe they possessed the white face patch of the White-faced Ibis (*P. chihi*). However, it was noted they had a very slight trace of whitish around the base of the bill.

KENNETH H. DUBKE, 3302 Navajo Drive, Chattanooga 37411.

FULVOUS TREE DUCK NEAR DOVER—A single bird of this southerly species (*Dendrocygna bicolor helva*) was trapped in 1965 along with other waterfowl during our banding activities at the Cross Creek National Wildlife Refuge. It was first trapped 4 April and re-trapped several times until the week of 20-26 June, after which it was not seen again. This is the fourth State record; the previous occurrences were two in east Tennessee and recorded in THE MIGRANT for June and December 1965 and the third at Kentucky Lake recorded in THE MIGRANT for September 1967. This duck was brought in to the office for photographic verification and several photos were made. They were shown to Mr. A. F. Ganier and other members of the T. O. S. during a visit to the Refuge on 2 December 1967. The Cross Creek Refuge begins two miles east of Dover and extends upstream along the south side of the Cumberland river for about 12 miles. These bottom lands are partially flooded by water backed up from the Barkley dam near the mouth of the river.

Another waterfowl of interest that visited the Refuge during 1966 and 1967 was a Whistling Swan. According to our records it was first seen on 18 December 1966 and remained to 18 March 1967. For waterfowl banding, we operate two large nylon-mesh traps, each of which at times may hold several hundred birds. During the waterfowl visitation season of 1966-1967, we banded 17,706 ducks. Thus far (2 Dec.) during the 1967 fall banding, we have banded 7,216 ducks and 77 geese. As of this date, about 1,200 Canada Geese and a few Blue Geese have come in, also we estimate about 35,000 ducks are here. Of the latter about 30,000 are Mallards.

CARROLL RYAN, Managr, Cross Creek National Wildlife Refuge, Dover 37058.

ROUGH-LEGGED HAWK IN KNOX COUNTY—On 20 January 1968, a Rough-legged Hawk (*Buteo lagopus*) was identified in the western portion of Knox County on Virtue Road. Dr. Joseph C. Howell sighted the hawk perched in a nearby deciduous tree. The bird was observed with 60x and 20x telescopes, by Dr. Howell, Fred Alsop, Jim Campbell, and myself.

The Rough-legged Hawk, which winters from Southern Canada to south North Carolina, north Louisiana, and north Texas, was one of the few records of this species for Knox County. The light phased buteo revealed all diagnostic characteristics with the white tail having a broad black band at the end, black belly, and the black patch at the wrist of the wing while in flight. The bird was observed again later in the day perching on a telephone pole.

The following day, 21 January 1968, the bird was observed in the same locality by the Knoxville Chapter of the T.O.S. All members present had an excellent view of the Rough-legged Hawk hovering. This characteristic had not been observed the previous day. The bird was last reported in the locality later in the day.

DANNY ELLIS, #1 Hedgewood Dr., Knoxville 37918.

AN ACCOUNT OF A RUFFED GROUSE WITH A TRACTOR—Our first encounter with our Ruffed Grouse (*Bonasa umbellus*) was in the Spring of 1963. My husband came in from the fields on the farm tractor and the grouse came flying over from behind and lit on the ground in front of the tractor where he sat and apparently waited for my husband to catch up and pass him. He repeated this procedure twice but was finally frightened away by our dog who came to investigate.

Ruffed Grouse and Tractor

His second visit came 21 and 22 April 1965. We were working around the barn lot when again he came, strutting and "chortling" with tail fanned and neck outstretched. The next day he appeared while two tractors were in the field discing—flying so close as to almost knock the hat from the head of the driver, landing in front of the tractor and running between the front wheels, although we could never get close to him when we were walking.

By now we were almost sure that this being the mating season, he confused the "thump, thump" of this type of tractor with that of a male rival and we felt we had his "tractor psychosis" diagnosed. Others supposed he had been a hatchery chick and associated the sound of the tractor with feeding time. We were apparently all wrong for in early April 1966 he appeared one morning after the tractor had been quiet and idle for days (a different year model but the same color) to guard, admire, inspect or challenge—whichever—quite docile until I approached slowly in the car with my camera when once again he assumed the stance of a fighter and reluctantly gave ground.

We have never heard his Spring drumming and have never known of any other Ruffed Grouse staying very long in this immediate vicinity. There are open fields, brush or woodlands here.

ROBBIE HASSLER, Box 1, Byrdstown 38549.

NOTES ON INFORMAL SYMPOSIUM

On 28 October 1967 fourteen members of various chapters of Tennessee Ornithological Society met at Pete Smith's Watts Bar Dam Resort for a symposium on various research projects under way in our state.

Chaired by Kenneth Dubke of Chattanooga, first speaker introduced was Charles R. Smith who elaborated on his recently published article (THE MIGRANT, 38:25) covering his study of Red-winged Blackbirds (*Agelaius phoeniceus*). One item brought out in the discussion was highest mortality rate was among those birds nesting in a wet area. No conclusion reached.

Kenneth Dubke discussed reports—mostly anecdotal and over a period of years—of Osprey (*Pandion haliaetus*) nesting in East Tennessee. Plans an all-out effort in the coming year to find an active Osprey nest. Welcomes help.

Tom Finucane spoke on Hawk Migration. Reported migration early this year with peak day being 17 September. Asked the opinion of the assembled group on the continuation of the project—the vote was unanimous for the continuance of the Hawk Migration project.

Dr. Joe Howell talked on the "mechanics" of the National Audubon Society's nesting records. Explicit instructions may be obtained from the National Audubon Society. This project has been under way some years but only forty such participants have been found.

Wallace Coffey next gave an enthusiastic talk on improvements planned in THE MIGRANT. Also gave some details of work involved in publishing an issue. Cited some steps already taken to ease the burden of the Editor.

Last speaker of the afternoon session was Jon DeVore on his study of Amnicola Marsh near Chattanooga. Displayed charts, records, notes and pictures on five nests of King Rail (*Rallus elegans*) and eighteen Least Bittern (*Ixobrychus exilis*) nests.

Evening session was given over entirely to Mr. Albert Ganier who urged all to participate in the Cornell University Nesting Card Record. He reminisced on records he had kept over the years and gave information on incubation periods of various species; also on locations of nests of various species—that is, on the ground, low or high in shrubs or trees. Just record cards kept on nests in your own yard can be valuable.

Those present voted unanimously to make the symposium an annual autumn affair and stated Pete Smith's Watts Bar Dam Resort is ideal for the occasion.

MRS. EARL F. OLSON, Norris 37828.

THE SEASON

Charles R. Smith, *Editor*

Those reports which follow include data from the months of December and January only. Throughout the state, the weather for December was decidely warmer and wetter than average. Temperatures for that month averaged from two to three degrees above the normal temperatures for all report areas. Total precipitation was from two to four inches above normal precipitation levels. On 28 December, all report areas with data available recorded snow, with the middle portion of the state receiving the heaveist snowfall (six inches near Cookeville, four inches at Nashville). With the exception of 28 December, other snowfall for that month was negligible. From all available information, the month of January appeared to be colder and slightly drier than usual. Snow was the prevalent form of precipitation for January, with Upper East Tennessee recording a total of approximately ten inches for that month. Savannah reported a period of "exceptionally long and deep snow" from 13 to 17 January. Chattanooga recorded three inches of snow on 14 January. One to two inches of snow fell in the Elizabethton area from 9 to 13 January with a heavy snowfall of 4.5 inches on 24 January.

The unusually warm weather in December could possibly have influenced the early courtship flights of the American Woodcock which were noted in some areas. In Nashville, Mourning Doves were also calling as early as December. The presence of many species, which are normally considered summer residents or migrants, during the winter months might also be attributed to the unusually mild weather during the early part of the period. Some notable winter records of species of this nature follow: Spotted Sandpiper at Savannah; Least Sandpiper and Dunlin at Chattanooga; Brown Thrasher at Knoxville and Elizabethton; Palm Warbler at Chattanooga and Knoxville; Baltimore Oriole at Nashville and Knoxville; Rose-breasted Grosbeak at Knoxville; Dickcissel at Nashville and Greeneville; Chipping Sparrow at Savannah, Chattanooga, and Elizabethton. There was also a winter influx of Tree Sparrows, with four out of seven areas across the state reporting them. Other notable observations follow: Whistling Swan at Chattanooga and Knoxville; Greater Scaup at Chattanooga and Knoxville; White-winged Scoter at Chattanooga, Knoxville, and Elizabethton; Oldsquaw at Knoxville and Bristol; Rough-legged Hawk at Chattanooga and Knoxville; Red Phalarope and Long-eared Owl at Chattanooga; Pigeon Hawk and Red-cockaded Woodpecker at Knoxville. Reports of Northern Finches (including the Purple Finch) were still few and scattered for this report period.

SAVANNAH—*Loons-Sparrows*: Common Loon: 20 Dec. (10) P. American Woodcock: courtship flights every clear evening throughout Dec. and Jan.; maximum 17 Dec. (16) H. Spotted Sandpiper: 20 Dec. (1) P. Horned Lark: 14 Jan. (50) H.; we have never previously counted more than about ten. Brown Thrasher: none seen; regular all season previous years. Tree Sparrow: at feeder 14-15 Jan. (2) H. Chipping Sparrow: our first Jan. record, 24 Jan. (1) H.

Locations: H—Harbert Hills, P—Pickwick Dam.

DAVID E. PATTERSON, Harbert Hills Academy, Olive Hill 38475.

NASHVILLE—*Loons-Gulls*: Common Loon: 10 Dec. (5) OHL (HCM, HEP). Horned Grebe: a peak of (2) 10 Dec. OHL (HCM, HEP). Ring-necked and Lesser Scaup Duck, almost absent, although usually our most abundant species. Herring Gull: a peak of (9) 21 Dec. BL (HEP). Ring-billed Gull: 8 Dec. (69) BL (HEP), the peak for period; their numbers far down on OHL. Bonaparte's Gull: no reports this winter.

Doves-Sparrows: Mourning Dove: heard cooing on 9 days during 9-25 Dec., a period of unseasonably warm weather; 18 Jan. (70) at feeder (MLL); otherwise, very scare. Baltimore Oriole: 19 Jan. (1) immature female found dead WA (MH), identified by (ARL) and skin in (AFG) collection; this is the first specimen and the third state record for a winter bird. Dickcissel: late Nov. thru 1 Feb. (1) home of (MLL). Purple Finch: a few small flocks reported. Tree Sparrow: 16-22 Jan. (2) each at homes of (ABH) and (FM) with (1) banded at the latter 22 Jan. by (KAG); 16-18 Jan. (1) home (MLL). Field Sparrow: only winter sparrow normal in numbers; 30 Jan. (1) in song (HCM), about 3 weeks earlier than average.

Locations: BL—Bush Lake, OHL—Old Hickory Lake, WA—Westview Avenue.

Observers: AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, MH—Martha Herbert, ABH—Mrs. A. B. Herron, ARL—Amelia R. Laskey, MLL—Mary Lou Lorance, HCM—Harry C. Monk, FM—Fanny Murphy, HEP—Henry E. Parmer.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

COOKEVILLE—*Mallard-Shrike*: Mallard: 20, 26 Dec. (1-2), 9, 28 Jan. (4-8). Pintail: 24, 26 Dec. (3). Black Vulture: 30 Jan. (5). Red-tailed Hawk: throughout Dec., Jan. (1-4). Bald Eagle: 1, 7, 15 Dec. (1), 22 Dec. (4). American Coot: throughout Dec., Jan. (30-175). Horned Lark: max. 8 Jan. (12). Eastern Bluebird: throughout Dec., Jan. (1-16). Ruby-crowned Kinglet: 12 Dec. (2). Loggerhead Shrike: throughout Dec., Jan. (1-3)

Location: Willow Grove Area.

Observer: Roy Hinds.

MARIE WHITE, 1218 Byrne Ave., Cookeville 38501.

CHATTANOOGA—*Loons-Ducks*: Common Loon: max. 12 Dec. (4) BWP. Horned Grebe: max. 22 Jan. (19) CL. Pied-billed Grebe: max. 26 Dec. (28) MC. Double-crested Cormorant: 12 Dec. (1) VR. Great Blue Heron: max. 15 Jan. (21) HRA. American Bittern: 6 Dec. (1) AM (found dead, JD). Whistling Swan: 12, 13 Dec. (4) HRA (JD, KD). Canada Goose: wintering population max. (3800) HRA. Snow Goose: 12 Dec. (1) HRA. Blue Goose: 12 Dec. (2), 19 Dec. (1) HRA. Gadwall: max. 13 Dec. (290) VR. Pintail: max. 8 Jan. (42) HRA. American Widgeon: max. 19 Dec. (250) HRA. Shoveler: max. 22 Jan. (16) WR. Redhead: max. 28 Jan. (11) NL. Ring-necked Duck: 28 Jan. (350) NL. Canvasback: max. 22 Jan. (30) WR. Greater Scaup: max. 4 Jan. (77) BWP. Lesser Scaup: max 28 Jan. (150) NL. Common Goldeneye: max. 3 Jan. (15) BWP). Bufflehead: max. 19 Dec. (80) HRA. White-winged Scoter: 15 Jan. (1) WB (JD, KD).

Hooded Merganser: max. 16 Dec. (48) HCP. Common Merganser: 16 Dec. (4) CL. Red-breasted Merganser: max. 13 Dec. (4) VR.

Hawks-Sparrows: Sharp-shinned Hawk: 16 Jan. (1) TRG. Cooper's Hawk: 19 Jan. (1) HRA. Red-tailed Hawk: max. 28 Jan. (20) BC. Rough-legged Hawk: 16 Jan. (1) BC (light phase, JD, KD). Golden Eagle: 15 Jan. (1) immature HRA (JD, KD). Bald Eagle: 19 Dec. (2) HRA, 4 Jan. (1) WA, 16 Jan. (2) TRG. Marsh Hawk: max. 16 Jan. (3) NL .Ruffed Grouse: 24 Dec. (1) FW. American Coot: wintering population at MC, max. 26 Dec. (6450). American Woodcock: 1-4 singing birds in warm weather since 31 Dec. Common Snipe: max. 15 Jan. (53) SB. Least Sandpiper: wintering at SB, HRA; max. 15 Jan. (22). Dunlin: wintering at SB, HRA; max. 4 Dec. (71). Red Phalarope: 12, 13 Dec. (2) SB (JD, KD). Ring-billed Gull: max. 3 Jan. (81) BWP. Barn Owl: 1-2 birds regularly at AM. Long-eared Owl: 31 Dec. (1) TMP (JD). Water Pipit: max. 13 Dec., 23 Jan. (35) SB. Pine Warbler: max. 26 Dec. (3) TRG. Palm Warbler: 26 Dec. (2) AM (JD, KD). Purple Finch: regular, max. 15 Jan. (25) HRA. Savannah Sparrow: max. 22 Jan. (12) WR. Vesper Sparrow: 15 Jan. (3) SB. Chipping Sparrow: 4 Dec. (2) BWP (KD). White-crowned Sparrow: max. 4 Dec. (6) HRA. Fox Sparrow: max. 22 Jan. (4) WR.

Locations: AM—Amnicola Marsh, BWP—Booker T. Washington Park, BC—Battle Creek area, CL—Chickamauga Lake, FW—Falling Water, HCP—Hamilton County Park, HRA—Hiwassee River Area, MC—Mullins Cove, NL—Nickajack Lake, SB—Savannah Bay, TMP—Tyner Minnow Ponds, TRG—Tennessee River Gorge, VR—Vincent Road, WA—Wolftever Creek, WB—Waconda Bay, WR—Woods Reservoir.

Observers: JD—Jon DeVore, KD—Ken Dubke, JG—James Garrett, AW—Adele West, GW—Gene West.

JON E. DEVORE, 4922 Sarasota Drive, Hixson 37343.

KNOXVILLE—*Loons-Mergansers*: Common Loon: 20 Dec. (2) FL (PP). Horned Grebe: 15 Dec. (1) LL (FA, DE, ES, JMC), 1 Jan. (1) C (MS), 1 Jan. (1) AL (PP). Whistling Swan: 9 Dec. (4) UTF (CM). Canada Goose: (200-390) throughout period at CL (FO). Snow Goose: (4) throughout period at CL (FO) Blue Goose: (1) throughout period at BL (JE). Mallard: max. 12 Dec. (40) CL (FA). Black Duck: max. 8 Jan. (30) CL (PP). Gadwall: max. 2 Jan (35) TB (CM). Green-winged Teal: 8 Jan. (5) CL (PP). American Widgeon: max. 19 Dec. (20) CL (FA). Shoveler: 20, 21 Jan. (3) C (FA, PP). Redhead: 15 Dec. (15) C (JMC *et al.*), 3 Jan. (1) FL (PP), 20 Jan. (7) C (JCH, FA, DE, CM, JMC). Ringed-necked Duck: max. 10 Jan. (50) FL (PP). Canvasback: 12 Dec. (5) CL (FA), 8 Jan. (5) CL (PP), 20 Jan. (3) C (JCL, *et al.*). Lesser Scaup: max. 15 Dec. (20) C (FA). Greater Scaup: 20 Jan. (5) C (JCH *et al.*). Common Goldeneye: from 15 Dec. max. 24 Jan. (63) UTF (CM). Bufflehead: 15 Dec. (2) C (JMC *et al.*), 20 Dec. (7) FL (PP). Oldsquaw: 13 Jan. thru 27 Jan. (1) C (SH, JCH), 27 Jan. through period (2) UTF (TK, CM). White-winged Scoter: 20-28 Jan. (5) C (CM, JCH, FA, DE, JMC). Ruddy Duck: 20 Jan. (2) C (FA, JCH). Hooded Merganser: 20 Dec. (5) FL (PP), 20 Jan. (9) C (JCH, *et al.*). Common Merganser: 16 Dec. (1) UTF (CM), 2

Jan. (1) TB (CM). Red-breasted Merganser: 15 Dec. (3) C (JMC *et al.*), 28 Dec. (1) UTF (CM).

Vultures-Woodpeckers: Turkey Vulture: roost 1, 2 Jan. (150) K (JE). Black Vulture: 22 Dec. (1) K (PP). Red-tailed Hawk: throughout period in small numbers, max. 21 Jan. (4) C (KOS). Rough-legged Hawk: 20, 21 Jan. (1) VR (JCH, FA, DE, JMC). Bald Eagle: 9 Dec. (2), 17 Dec. (3), 8 Jan. (1), 21 Jan. (1) all at ND by (FO). Marsh Hawk: 28 Jan. (1) N (MG, CM, JMC). Pigeon Hawk: 25 Jan. (1) M (PP). Herring Gull: throughout period in small numbers, max. 15 Dec. (20) C (FA, DE, ES, JMC). Ring-billed Gull: max. 15 Dec. (250) FL (JMC *et al.*). Bonaparte's Gull: 15 Dec. (75) C (JMC *et al.*). Red-cockaded Woodpecker: 25 Jan. (1) S (BC).

Thrashers-Sparrows: Brown Thrasher: 10 Jan. (1) NH (JBO). Palm Warbler: 17 Jan. (2) C (MS). Baltimore Oriole: throughout period SK at feeder of (EM). Rose-breasted Grosbeak: 26 Jan. through rest of period (1) G (JD). Evening Grosbeak: 10 Dec. (2) G (AM), 12 Dec. (6) G (HB), 21 Dec. (1) G (AS), 16 Jan. (5) G (JM). Purple Finch: throughout period in small numbers, max. 4 Dec. (50) CL (PP). Pine Siskin: 12 Jan. (8) C (MS). Tree Sparrow: 25 Jan. (10) HM (PP). Fox Sparrow: 27 Jan. (1) HM (FA).

Locations: A—Alcoa Lake, BL—Butterfly Lake, C—Concord, CL—Cove Lake, G—Gatlinburg, HM—House Mountain, K—Kodak, LL—Kaurel Lake, FL—Fort Loudon Lake, M—Mascot, N—Norris, ND—Norris Dam, NH—North Hills, S—Seymour, SK—South Knoxville, UTF—Univ. Tennessee Plant Sciences Farm, TB—Toole's Bend, VR—Virtue Road.

Observers: FA—Fred Alsop, HB—Hubert Bebb, JMC—James M. Campbell, BC—Brockway Crouch, JD—Mrs. James Dingwall, DE—Danny Ellis, JE—John Elson, MG—Maurice Grigsby, JCH—Dr. Joseph C. Howell, SH—Susan Hoyle, TK—Tony Koella, KOS—Knoxville Chapter TOS, JM—Joseph Manley, CM—Chris McMillan, EM—Mrs. Elliott McNutt, AM—A. Mueller, FO—Frances Olson, JBO—J. O. Owen, PP—Paul Pardue.

JAMES M. CAMPBELL, 15 Hedgewood Dr., Knoxville 37918.

GREENEVILLE—*Herons-Gulls*: Great Blue Heron: throughout the period GC. Mallard: 27 Dec. (5) RF (RN). Black Vulture: 27 Dec. (12). Cooper's Hawk: 27 Dec. (1). Red-tailed Hawk: 27 Dec. (3). Common Snipe: 27 Dec. (2) RF (RN). Ring-billed Gull: 27 Dec. (20) DC (EJ).

Larks-Warblers: Horned Lark: 27 Dec. (5). Brown Creeper: 27 Dec. (2) RF (RN). Brown Thrasher: 27 Dec. (1) TC (EJ). Eastern Bluebird: 27 Dec. (1). Ruby-crowned Kinglet: 27 Dec. (2). Palm Warbler: 27 Dec. (1) RF (RN).

Blackbirds-Sparrows: Red-winged Blackbird: 27 Dec. (20) DC(RS). Common Grackle: 27 Dec. (495). Dickcissel: 16 Jan. (1) throughout rest of the period (HR). Purple Finch: 27 Dec. (23).

Locations: DC—Davy Crockett Lake, GC—Grassy Creek, RF—Roaring Fork, TC—Tusculum College.

Observers: EJ—E. Jeffers, RM—Roger Miller, RN—Ruth or Richard Nevius, HR—Helen Reed, RS—Royal Spees.

RICHARD NEVIUS, Route 3, Greeneville 37743.

ELIZABETHTON—*Loons-Gulls*: Common Loon: max. 27 Jan. (2) WaL. Horned Grebe: max. 22 Jan. (13) BL. Pied-billed Grebe: max. 22 Jan. (14) BL. Great Blue Heron: max. 19 Jan. (10) BL, PHL. Mallard: max. 27 Jan. (6). Black Duck: max. 27 Jan. (76) WaL. American Widgeon: 22 Jan. (3) BL. Redhead: 26 Jan. (1) BL (LRH, GW). Ring-necked Duck: max. 27 Jan. (89) WaL, WiL. Canvasback: 19 Jan. (28), 26 Jan. (36), both BL. Lesser Scaup: (6-12) throughout Jan. Common Goldeneye: max. 26 Jan. (155) BL (LRH, GW). Bufflehead: max. 27 Jan. (76) WaL, WiL. White-winged Scoter: 22 Jan. (2) BL (LRH), 26 Jan. (3) BL (LRH, GW). Hooded Merganser: 27 Jan. (9) WaL (LRH, CRS). Common Merganser: 27 Jan. (6) WaL (LRH, CRS). Turkey Vulture: 2 Dec. (1). Bald Eagle: 19 Jan. (1) immature, BL (LRH). American Coot: 13, 19 Jan. (9) BL. American Woodcock: 31 Jan. (1) singing, WaR (LRH). Herring Gull: max. 26 Jan. (20) BL. Ring-billed Gull: max. 22 Jan. (200) BL.

Owls-Sparrows: Barn Owl: 19 Jan. (1) (MER, CRS). Great Horned Owl: 13 Jan. (1) BL (WAB, MER, CRS), 28 Jan. (1) MC (CRS). Red-headed Woodpecker: 27 Jan. (1). Horned Lark: 21 Jan. (1), 27 Jan. (11). Common Raven: 28 Jan. (2) UM (CRS). Brown Creeper: 26 Dec. (1) (HD). Winter Wren: 13 Jan. (1). Brown Thrasher: throughout Dec., Jan. JC (WAB). Red-winged Blackbird: first flock, 27 Jan. (18). Purple Finch: 17 Dec. (1) RM (FWB), 16-27 Jan. (1-2) JC (WAB, HD). Red Crossbill: 27 Jan. (1) B (LRH, CRS). Chipping Sparrow: 20 Jan. (2) BL (HD, JD). Swamp Sparrow: 28 Jan. (1).

Locations: BL—Boone Lake, B—Butler, Johnson County, JC—Johnson City, MC—Milligan College, PHL—Patrick Henry Lake, RM—Roan Mountain, UM—Unaka Mountain, WaL—Watauga Lake, WaR—Watauga River, WiL—Wilbur Lake.

Observers: FWB—Fred W. Behrend, WAB—W. A. Bridgforth, Jr., HD—Mrs. Harold Dillenbeck, JD—Joy Dillenbeck, LRH—Lee R. Herndon, MER—M. E. Richmond, CRS—Charles R. Smith, GW—Gary Wallace.

CHARLES R. SMITH, Route 2, Johnson City 37601.

BRISTOL—*Loons-Ducks*: Common Loon: max. 30 Dec. (10) SHL (WC, DM, DGD). Horned Grebe: max. 30 Dec. (12) SHL (WC, DM, DGD). Pied-billed Grebe: 8 Dec. (12) SHL (WC, DGD). Great Blue Heron: max. 30 Dec. (7) SHL (WC, DM, DGD). Mallard: max. 30 Dec. (93) SHL (WC, DM, DGD). Black Duck: max. 30 Dec. (139) SHL (WC, DM). Gadwall: 30 Dec. (1) SHL (WC, DM). Redhead: 30 Dec. (1) SHL (WC). Bufflehead: 4 Dec. (2) SHL (WC, DGD), 30 Dec. (6) SHL (WC, DGD). Oldsquaw: 7 Jan. (13) SHL (JSS) one of group shot and identified (JSS, WC). Ruddy Duck: 30 Dec. (3) SHL (WC).

Vultures-Owls: Turkey Vulture: max. 30 Dec. (26) SHL. Black Vulture: max. 30 Dec. (48). Cooper's Hawk: 3 Dec. (1) SV (WC). Red-tailed Hawk: several records Dec., Jan. Sparrow Hawk: 4 Dec. (1) SV (WC, DGD). Common Snipe: 12 Dec. (1) BT (WC, DGD). Herring Gull: max. 30 Dec. (7) SHL (WC, DM, DGD). Ring-billed Gull: max. 30 Dec. (15) SHL (WC, DM, DGD). Great Horned Owl: 16 Jan. (1) BL (WC, DGD); a single bird regularly during Jan. SHL (WC, BS, DGD).

Thrush-Sparrows: Hermit Thrush: 30 Dec. (1) BV (EV, RV). Eastern Bluebird: 6 Dec. (7) SHL, 13 Dec. (2) SHL, 27 Jan. (1) Golden-crowned Kinglet: max. 30 Dec. (23). Ruby-crowned Kinglet: 4 Dec. (1), 30 Dec. (5), only records. Loggerhead Shrike: 4 Dec. (1) SV (WC, DGD). Brown-headed Cowbird: only record 30 Dec. (39) SHL (WC, DGD). Purple Finch: 15 Jan. (5) BT (WC, DGD). Pine Siskin: 19 Jan. (1) BT (BS). Tree Sparrow: 15 Jan. (1) BT (BS), 16 Jan. (1) BT (BS, WC), 17 Jan. (1) BT (BS, WC), 18 Jan. (2) BT (BS, WC, DGD), 19 Jan. (2) BT (BS), all records for observations at a single feeding station; our only known local record ever. Fox Sparrow: 30 Dec. (2), 13 Jan. (1).

Locations: BT—Bristol, Tennessee, BL—Boone Lake, Sullivan Co., BV—near Bristol, Virginia, SHL—South Holston Lake, Tenn., SV—Shady Valley, Johnson County.

Observers: WC—Wallace Coffey, DGD—Gerry Delantonas, DM—David McPeak, BS—Bill Senter, JSS—Joe S. Slagle, EV—Enno vanGelder, RV—Roger vanGelder.

WALLACE COFFEY, 508 Spruce Street, Bristol 37620.

NORTH AMERICAN NEST RECORD CARD PROGRAM

As many readers are aware, the Nest Record Card Program is now completing its third year on a continent-wide basis. We appreciate the assistance of the hundreds of persons and Bird Clubs whose enthusiasm and patience make this program possible. We are anxious to solicit help from as many clubs and cooperators as possible. If you are interested in helping in this research, please get in touch with the Laboratory of Ornithology at Cornell University for instructions and nest-record cards. We urge all present contributors to return any completed cards. We also request that participating clubs and birders order additional cards, if necessary.

MRS. EDITH EDGERTON
Nest-record Card Program
159 Sapsucker Woods Road
Laboratory of Ornithology
Ithaca, New York 14850

Printed at Bristol, Tennessee; 22 April 1968.

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The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

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IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

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Birds

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TELEVISION TOWER CASUALTIES AT NASHVILLE, AUTUMN 1967

BY AMELIA R. LASKEY

Casualties for autumn, 1967, were first found on 1 Sept. at both WSIX and WSM-TV towers. The total for the fall migration was 349 individuals of 47 species (98 of 27 species for WSIX; 251 of 40 species for WSM).

This is the smallest casualty list here since these high TV towers have been erected. Reports from field observers in the Nashville area also indicate a poor autumn migration for 1967. These similar reports cannot be definitely analyzed on a purely local basis and reports from other areas are not yet available—particularly needed are those from areas north of Nashville. However, our reports suggest a number of possibilities, such as, is there a decline in population (especially in thrushes and warblers) or was there a hiatus in normal migration over Nashville when migrants failed to stop over—perhaps flying over the overcast?

This deviation was very noticeable from mid-October into early November. On most of these mornings no casualties were found. The total for both towers during this period was only eight birds. According to the *U. S. Monthly Meteorological Summaries,* there were ten days with average temperatures below normal, with fastest winds from a southerly direction and ten days with some precipitation and overcast.

The greater number of casualties occurred on 11 Sept. total 77 and on 9 Oct. with a kill of 96. On 7 Oct. at WSM, there was a kill of 48 with the temperature ten degrees above normal and south wind. However, there was a fog that night and early morning as a cold front moved in between days of precipitation.

The highest number of casualties involved the species that usually lead the list: Ovenbird 64; Magnolia Warbler 47; Tennessee Warbler 44. These three species total 45 percent of the 1967 casualties.

The most unusual and puzzling bird was a Blackpoll Warbler found 12 Oct. It had dark tarsi and toes (soles lighter). The specimen was sent to U. S. National Museum for verification. In her report Mrs. Roxie C. Laybourne commented: "The feet of the blackpoll are not always light in color as given in some of the field guides."

Of especial interest were the new extremes in dates of migration: Cape May Warbler, 11 Sept. earliest of three known autumn specimens (all from

TV tower casualties); Traill's Flycatcher 7 Oct. and Prothonotary Warbler 10 Oct. which are latest autumn departure dates on record here.

Following is the list of casualties. The first number indicates WSIX, the second for WSM. An * indicates the species was found at WSM only.

Sora 1-1; Yellow-billed Cuckoo 1-1; Black-billed Cuckoo *1; Common Nighthawk 1; Yellow-bellied Sapsucker *1; Eastern Kingbird *1; Acadian Flycatcher *1; Traill's Flycatcher *1; Wood Pewee *2; Catbird 2-6; Robin *1; Wood Thrush 1; Swainson's Thrush *2; Veery 1-1; Red-eyed Vireo 7-16; Philadelphia Vireo 1-2; Black-and-white Warbler 5-11; Prothonitary Warbler *1; Worm-eating Warbler *1; Golden-wing Warbler 1; Blue-wing Warbler *1; Tennessee Warbler 3-41; Nashville Warbler *2; Yellow Warbler *2; Magnolia Warbler 17-30; Myrtle Warbler *1; Black-throated Green Warbler 1-3; Blackburnian Warbler 3-3; Chestnut-sided Warbler 9-11; Bay-breasted Warbler 4-13; Blackpoll Warbler *1; Palm Warbler 2; Ovenbird 12-52; Northern Waterthrush 3-6; Kentucky Warbler 1-6; Mourning Warbler *1; Yellowthroat 2-2; Yellow-breasted Chat 1-6; Wilson's Warbler *1; Canada Warbler 3-1; American Redstart 1-4; Baltimore Oriole *1; Scarlet Tanager *1; Indigo Bunting *2; Lincoln's Sparrow 1; Swamp Sparrow 1 Unidentified account condition, account predation 11-10.

Appreciation for their help in this study is gratefully expressed to Mike Bierly, Clara W. Fentress, Katherine A Goodpasture, H. E. Parmer and the personnel of both TV towers.

1521 Graybar Lane, Nashville 37215.

T.O.S. SHOULDER BADGE PROGRAM

The new Shoulder Badge Chairman has recently announced the current stock and price list for the following items that are available:

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ANNUAL AUTUMN HAWK COUNT, 1967

BY THOMAS W. FINUCANE

The 18th T.O.S. fall hawk-count totaled 4832, with 4635 Broad-winged Hawks (*Buteo platypterus*). Except for 1965, this was the lowest since 1958, but higher than any year before 1959. The count was a record high up to 15 Sept. and, excluding the 1959 data, exceeded the total of all data up to 15 Sept. The peak-day for Broad-winged Hawk migration is still 22 Sept. If the difference between all counts (from 1950 to the present) made before and after 22 Sept. is less than the total of all counts made on 22 Sept., then 22 Sept. is peak-day. Otherwise some other date would be designated peak-day, by a similar argument.

FINUCANE

Recently we were asked whether the peak-day is a mean or a median. If we consider the migration to be distributed normally along a set of consecutive days, the peak-day represents both the median and the mean of our sample of 88,000 Broad-winged Hawks. Since the peak is the middle of a tabulation of all hawks, listed in order of the date observed (day and month), it is a median by virtue of the method by which it is computed. In such cases the median can be computed faster than the mean, and the result is close enough to the mean—the same day.

The average (mean) count for the 25 days from 10 Sept. to 4 Oct, when 99% of our hawks fly, is 3500, which is closer to the total for 18 Sept. than to the total for any other day. 18 Sept is also the date of the median count. Including all data outside the 25-day interval would, of course, reduce the mean and median counts, but they would still be close together; the peak day—mean and median day—would not change. Largely because we do not subdivide days, we get our peak via the median, which comes on the same day as the mean, and with less arithmetic. Extreme dates are 13 Aug., 1964, when Wallace Coffey and T. Roger Stone counted 19 Broad-winged Hawks and 19 Oct., when Maxie Swindell counted 12.

The following notes are numbered to correspond with the item numbers in the data table:

4. Ken Dubke saw this Osprey carry a fish over Elder Mt.

5. Frost warnings heard from radio station, Windsor, Ontario, four days before this count—a record for 12 Sept.

6. Flights were heavy and over the lookout when the wind was from the south and southeast. From 1:30 P.M. to 3:30 P.M. the wind was from the north and the comparatively few hawks counted were scattered over the countryside. Six Ospreys!

8. Sharp-shinned Hawk captured bird and devoured it on the wing.

12. Foothills Parkway, near Townsend, 11:00 A.M. to 1:30 P.M.: The birds were going directly south. As the day grew later, the hawks seemed to fly higher. Broad-winged Hawks were working the thermals; the others stayed close to the ridge.

13. Have never seen 10 Cooper's Hawks in one group, but they were

there: Cooper's Hawk size and shape—some so near the tower markings could be seen in the sunlight we had that day.

25. From the site of the old Elder Mt. Fire Tower, Ken Dubke, 10:13 A.M. to 6:15 P.M., had 11 hawks in the first three hrs., two in the next hour, one in the next two hrs., then 164 between 4:30 P.M. and 5:00 P.M., and 91 more after 5:00 P.M. Saw nine Canada Geese at 6:00 P.M.

26. On the same day, 22 Sept. the Mendota Fire Tower count was smaller than Ken's but steady all day, with five Broad-winged Hawks and one unidentified after 5:30 P.M.

35. There were about 30 people at the lookout: Girl (Cadet) Scouts, their leaders, and one hawk watcher.

KEY TO REPORTERS

B—Bill Finucane, Kingsport; C—Boy Scouts, Mr. and Mrs. David Smith, Johnson City, Charlotte Finucane; D—Ken Dubke, Chattanooga; E—Mr. and Mrs. Emmitt Smith, Jr., Nickelsville, Va.; F—John Fogl, Nickelsville; G—Girl Scouts, Troup 143, Kingsport; H—Mr. and Mrs. David Highbaugh, Mr. and Mrs. Geo. Wood, Knoxville; J—Joe Finucane; K—Patrick Finucane; L—Mrs. Elva Darnell, R. C. Sievert, Dr. and Mrs. Royal Spees, Greeneville; N—Thos. Finucane; O—Tom, Tom III, and Melanie Odom, Kingsport; Mrs. Richard Nevius, Roger, Steve, and Jeff Miller, Greeneville; P—Mrs. Darnell, Mrs. Spees; Q—Bob Quillen, Bristol, Va., E. E. Scott, Charlotte Finucane; S—E. E. Scott, Nickelsville, Va.; T—Tom Finucane, Mrs. Ann Switzer, Kingsport; U—Mike Finucane, Laurent Choiniere, Kingsport; V—Jon DeVore, Chattanooga; W—Wallace Coffey, Bristol; W. A. Bridgforth, Charles Smith, Johnson City; X—Maxine and Hugh Crownover, Chattanooga; Y—Marion Finucane.

KEY TO STATIONS

Bald Mt. Tower, Greene Co.; C—Chimney Top, Sullivan Co.; E—Elder Mt., Chattanooga F—Foothills Parkway, near Townsend; G—Gray's Ferry, Hiwassee River; K—Rogersville-Kyle's Ford Fire Tower; M—Mendota Fire Tower, Clinch Mt., Va.; W—Meadow Creek Fire Tower, Cocke County.

WIND AND SKY CODES

Wind data are given in the Beaufort Scale. Sky conditions range from perfectly clear (O) to heavy overcast (5).

1434 Watauga Street, Kingsport 37664.

ANNUAL AUTUMN HAWK COUNT, 1967

No.	Date	Obs.	Hrs.	Station	Wind	Sky	SS	Cp	RdT	RS	Bwg	Msh	Osp	SpH	Other
1	9/2	W	4½	M	5:NE	0	-	-	1	-	12	-	-	-	1a
2	10	JN	6	C	2:NW	2	-	-	2	-	1	-	-	-	-
3	11	S	4½	M	4:SE	1	-	1	-	-	28	-	-	1	-
4	12	D	4	E	3:E-SE	1	-	-	3	-	6	-	3	-	1b
5	12	S	4¼	M	4:NW	1	-	-	-	-	974	-	1	-	2e
6	13	SF	6½	M	4:S	1	1	1	2	-	635	-	6	-	2b
7	14	P	4-3/4	W	3:N-E-S	2	-	-	10	-	103	-	-	-	1
8	14	S	7½	M	4:SE	1	2	1	1	-	290	-	-	-	1b
9	15	QTF	5	M	3:SE	0	2	1	4	-	431	-	1	-	1b
10	16	ES	7	M	3:NE	0	1	1	5	-	411	-	1	-	-
11	17	VW	6	E	6:N-NW	0	-	-	2	-	50	-	-	-	-
12	17	H	3	F	2-3:S	-	1	-	1	-	263	3	-	3	-
13	17	L	5-3/4	B	2-4:NW	2	1	11	3	1	70	-	-	-	-
14	17	OK	8	K	1-3:S-E	1	-	1	1	-	248	-	-	-	-
15	17	QGU	7	M	4:SE	3	1	2	1	-	69	-	-	-	-
16	18	D	5	E	2:E	1	-	-	-	-	3	-	-	-	1
17	18	D	0	G	1-3:SW	2	-	-	-	-	7	-	-	1	-
18	18	N	8¼	M	Q-1:N-E	0	-	-	1	-	14	-	-	-	4
19	19	D	6	E	0-3:W	3	-	-	3	1	3	-	-	3	1e
20	19	SN	7	M	1-SE-SW	4	1	-	-	-	14	-	-	-	2b
21	20	V	3	E	1:S-SW	0	-	-	-	-	-	-	-	-	-
22	20	SN	7¼	M	1-2:S-W	3	-	-	-	1	43	-	-	-	-
23	21	D	4	E	3-SW-W	4	-	-	3	-	-	-	-	-	-
24	21	YN	2	M	3-1:S&W	5	-	-	-	-	-	-	-	-	-
25	22	D	8	E	3:NE-W	3	1	1	2	-	266	1	-	1	-
26	22	SN	8½	M	3:NE-N	2	3	1	2	1	144	-	2	-	1a
27	23	Z	8	E	1-3:SE	0	-	2	6	-	290	2	1	1	1
28	23	BN	7	C	1-NE	0	-	2	4	1	28	-	-	-	4
29	23	CG	5	M	1-NW	0	4	-	-	-	55	-	1	-	-
30	24	V	3	E	2:N-NW	0	1	1	1	-	8	-	-	-	1p
31	24	KN	6	C	2:S	3	-	-	-	-	4	-	1	-	-
32	24	S	7	M	-	-	-	-	-	-	37	-	-	-	-
33	25	D	4	E	3:NE	1	2	-	1	-	14	-	-	-	1
34	26	N	8-3/4	M	4-2:S	0	-	-	4	2	24	2	-	-	6
35	30	N	7	M	0-2:NW	1	1	-	-	-	31	1	1	-	1
36	10/1	KN	6¼	M	1:SW-NW	0	1	-	1	1	39	1	1	-	4
37	5	N	8	M	0-2:W	2	1	1	1	3	20	-	-	-	5
TOTALS			201				23	26	64	11	4635	10	19	10	39

(A = accipiter; b = buteo; e = eagle; p = pigeon hawk)

THE 1968 SPRING FIELD DAYS

JON E. DEVORE, *State Compiler*

Counts were submitted from a total of ten areas across the state. The total number of species seen for the count was 200. This is somewhat below the high count last year of 206 species. Knoxville's count led all others with a total of 147 species. They were followed by Chattanooga with 139.

INFORMATION ON THE COUNTS

In the species tabulation and description that follow, the localities are listed from west to east.

REELFOOT—The count was taken on and in the vicinity of Reelfoot Lake and within the limits of the Christmas Count area. 27 April 1968; 7:00 A.M. to 5:00 P.M. Cloudy all day; little wind; temperature 51° to 74° F. Total species: 96. Four observers in two parties.

Eugene Cypert (compiler), Mary Louise Cypert, Janice Leggett, Betty Sumara.

COLUMBIA—Same general area as covered by the Christmas Count. 30 April 1968, 1 May 1968; 12:00 noon to 12:00 noon. Clear; wind NW 5—15 mph; temperature 45° to 80° F. Total species: 135. Four observers.

William Fuqua, Daniel Gray, George Mayfield (compiler), Delton Porter.

NASHVILLE—Same area as previous spring counts except no coverage of Bush and Old Hickory Lakes. 27 April 1968; Dawn until 5:30 P.M. Cool with rain at dawn until 9:00 A.M., then a gradual clearing. The Rusty Blackbirds were eight days latest ever for spring. Two were at Two Jays (HEP), one at Fernvale (AC). Total Species: 128. Thirty-seven observers in twelve parties.

Clyde D. Anderson (compiler).

COOKEVILLE—Areas included were within the 15-mile-diameter circle of the town. 20 April 1968; 5:00 A.M. to 6:30 P.M. Weather clear and sunny except for light cloudiness early in the A.M., little wind. 69° to 80° F. Thirteen observers. Total species: 72.

Miss Beulah Clark, Mr. Sam Coward, Mrs. Caprice Haile, Mr. R. D. High, Mr. Roy Hinds, Dr. Paul L. Hollister, Miss Elizabeth Killeffer, Dr. and Mrs. Sidney L. McGee, Mr. Miser R. Richmond, Mrs. Thelma Tinnon, Miss Chrissa Wendt, Miss Marie White (compiler).

T.O.S. STATE MEETING—General coverage of the Cookeville area. 11 May 1968 and 12 May 1968. Generally cloudy with intermittent rain on both days. 50° to 80° F. Total Species: 127. Miser R. Richmond (compiler).

CHATTANOOGA—Same area as Christmas Count plus additional areas to the north on Chicamauga Lake. 5 May 1968; 6:00 A.M. to 10:00 P.M. Clear to partly cloudy in the A.M. and P.M., 5 to 15 mph wind in the A.M., subsiding in the P.M.; temperature 50° to 71° F. Total species: 139. Nineteen observers.

Francis Barnwell, Ralph Bullard, Maxine Crownover, Jon DeVore (compiler), Kenneth Dubke, Roy Evenson, Edith Fenn, Jim Garrett, Ron Homer, Mike Lily, Jerry Linderman, Eugene and Eva Ranger, Joe Saladino, Veta Sliger, Martha Sterchi, Roger Swanson, Jack and Mark Wagner.

ANNUAL SPRING FIELD DAYS, 1967

	REELFOOT	COLUMBIA	NASHVILLE	COOKEVILLE	T.O.S. MEETING	CHATTANOOGA	KNOXVILLE	GREENEVILLE	ELIZABETHTON
Common Loon	--	--	--	--	--	1	--	--	--
Pied-billed Grebe	--	35	2	--	--	--	--	--	2
Great Blue Heron	--	--	1	--	--	9	2	--	1
Green Heron	--	2	10	--	5	11	18	6	9
Little Blue Heron	--	1	--	--	--	1	--	--	--
Cattle Egret	71	--	--	--	1	--	--	--	--
Common Egret	1	--	--	--	--	--	--	--	--
Bl.-cr. Night Heron	--	--	--	--	--	--	23	--	--
Yel.-cr. Night Heron	2	2	--	--	1	4	2	1	--
Least Bittern	--	--	--	--	--	1	1	--	--
American Bittern	--	1	2	--	1	6	2	--	1
Canada Goose	--	--	--	--	--	9	--	3	1
Snow Goose	--	--	--	--	--	--	--	1	--
Blue Goose	--	--	--	--	--	--	1	--	--
Egyptian Goose	--	--	--	--	--	--	--	2	--
Mallard	156	5	5	--	--	7	3	--	3
Black Duck	--	--	--	--	--	--	4	--	--
Pintail	--	--	--	--	--	--	--	2	--
Green-winged Teal	--	--	--	--	--	--	1	--	--
Blue-winged Teal	21	66	2	--	2	8	15	6	10
American Widgeon	--	--	1	--	--	--	--	--	10
Shoveler	5	--	--	--	--	--	--	--	--
Wood Duck	12	1	15	--	2	6	18	1	16
Ring-necked Duck	--	--	--	--	--	2	--	--	1
Lesser Scaup	2	7	81	--	--	2	--	1	2
Bufflehead	--	--	--	--	--	1	--	--	12
Ruddy Duck	--	1	--	--	--	--	--	--	--
Common Merganser	--	--	--	--	--	--	--	1	--
Red-breasted Merganser	2	--	--	--	--	--	--	--	--
Turkey Vulture	1	9	33	7	11	9	17	17	2
Black Vulture	--	12	9	--	4	2	--	1	1
Sharp-shinned Hawk	--	--	1	--	1	1	--	--	--
Cooper's Hawk	--	--	1	--	1	--	1	1	--
Red-tailed Hawk	--	2	13	1	3	4	7	2	3
Red-shouldered Hawk	2	2	2	--	1	--	--	--	--
Broad-winged Hawk	1	2	4	--	--	3	9	1	4
Marsh Hawk	1	--	--	--	--	2	--	--	--
Osprey	--	--	3	--	--	1	4	--	1
Sparrow Hawk	3	13	9	1	5	4	3	4	8
Ruffed Grouse	--	--	--	--	--	--	3	--	5
Bobwhite	3	47	75	22	21	30	209	46	53
Ring-necked Pheasant	--	--	--	--	--	--	--	4	--
Virginia Rail	--	2	--	--	--	--	--	--	--
Sora	1	--	--	--	--	4	3	--	--
American Coot	79	61	22	--	3	7	2	2	3
Semipalmated Plover	--	1	--	--	--	7	--	--	--
Killdeer	12	14	18	7	4	49	59	12	18
American Woodcock	--	--	--	--	1	2	--	1	--
Common Snipe	1	2	2	1	--	10	28	1	4
Upland Plover	--	--	--	--	--	--	1	--	--
Spotted Sandpiper	3	17	6	--	4	9	8	--	2
Solitary Sandpiper	9	1	21	1	2	9	45	7	10
Greater Yellowlegs	5	17	1	--	--	12	7	--	1
Lesser Yellowlegs	7	47	4	--	--	19	10	3	26
Pectoral Sandpiper	3	7	--	--	--	1	10	--	2
White-rumped Sandpiper	--	--	--	--	--	--	--	--	5
Least Sandpiper	6	31	--	--	--	11	--	--	2
Dowitcher	--	2	--	--	--	--	--	--	1
Semipalmated Sandpiper	--	15	--	--	--	5	1	--	--
Ring-billed Gull	--	--	1	--	--	--	--	--	1
Black Tern	--	1	--	--	--	--	--	--	--
Mourning Dove	18	28	84	69	68	122	585	84	53
Yellow-billed Cuckoo	--	3	15	--	5	2	2	1	6
Black-billed Cuckoo	--	--	--	--	1	--	--	--	2
Barn Owl	--	--	--	--	--	1	1	--	--

	REELFOOT	COLUMBIA	NASHVILLE	COOKEVILLE	T.O.S. MEETING	CHATTANOOGA	KNOXVILLE	GREENEVILLE	ELIZABETHTON
Screech Owl	--	1	--	--	--	2	1	1	1
Great Horned Owl	--	2	1	--	--	--	1	1	--
Barred Owl	3	5	--	1	2	1	--	--	1
Chuck-will's-widow	--	4	1	--	8	21	26	9	2
Whip-poor-will	--	12	12	--	2	2	2	--	18
Common Nighthawk	--	6	6	2	9	10	9	1	8
Chimney Swift	12	150	283	62	60	272	255	604	146
Ruby-thr. Hummingbird	8	5	15	8	7	1	7	1	8
Belted Kingfisher	2	1	19	1	7	4	13	2	12
Yellow-sh. Flicker	3	4	40	28	9	25	127	37	46
Pileated Woodpecker	6	7	32	5	7	3	19	9	5
Red-bellied Woodpecker	8	30	73	17	15	12	51	9	5
Red-headed Woodpecker	13	2	11	5	8	2	7	13	1
Yellow-bel. Sapsucker	--	--	1	6	--	--	2	2	--
Hairy Woodpecker	1	5	11	3	3	1	7	6	3
Downy Woodpecker	3	30	39	21	8	6	39	10	15
Eastern Kingbird	4	24	38	3	24	53	52	11	19
Great Crested Flycatcher	4	4	16	5	20	39	41	12	3
Eastern Phoebe	2	10	28	7	13	25	47	18	38
Acadian Flycatcher	--	6	8	--	13	7	--	6	9
Least Flycatcher	--	1	--	--	--	--	--	--	14
Eastern Wood Pewee	3	8	15	5	20	14	9	10	14
Olive-sided Flycatcher	--	--	--	--	--	--	1	--	--
Horned Lark	7	14	1	2	4	5	7	7	5
Tree Swallow	410	9	7	--	2	53	48	--	8
Bank Swallow	4	2	2	--	2	30	58	--	3
Rough-winged Swallow	2	18	18	--	5	40	57	17	41
Barn Swallow	44	65	152	27	38	116	325	56	117
Cliff Swallow	--	--	81	2	--	126	3	--	--
Purple Martin	38	8	73	4	10	352	173	28	23
Blue Jay	8	52	193	129	50	146	399	75	177
Common Raven	--	--	--	--	--	--	--	--	2
Common Crow	40	57	85	59	35	62	336	60	109
Carolina Chickadee	26	38	86	26	16	42	125	26	33
Tufted Titmouse	18	32	108	41	33	26	136	35	44
White-br. Nuthatch	--	2	8	6	3	3	2	--	--
Red-br. Nuthatch	--	--	--	--	--	--	--	--	3
Brown Creeper	--	--	--	--	--	1	--	--	--
House Wren	--	--	1	--	--	--	13	13	14
Winter Wren	--	--	--	--	--	--	2	1	6
Bewick's Wren	--	1	9	--	2	1	--	1	--
Carolina Wren	12	24	72	16	20	45	163	10	33
Long-bld. Marsh Wren	--	--	--	--	--	--	2	--	--
Short-bld. Marsh Wren	--	--	--	--	--	1	--	--	--
Mockingbird	12	21	149	49	25	144	358	70	120
Catbird	3	13	36	12	11	18	31	14	50
Brown Thrasher	2	12	54	39	22	64	135	42	58
Robin	33	15	171	69	28	165	550	134	235
Wood Thrush	6	7	61	4	28	59	150	9	63
Hermit Thrush	--	--	--	--	--	--	1	--	--
Swainson's Thrush	2	5	15	--	14	4	21	--	--
Gray-cheeked Thrush	1	2	4	--	2	--	--	--	--
Veery	--	3	2	--	3	2	2	--	2
Eastern Bluebird	1	24	83	22	63	32	120	3	30
Blue-gray Gnatcatcher	28	12	72	2	20	4	35	14	6
Golden-crowned Kinglet	--	--	--	--	--	--	--	1	13
Ruby-crowned Kinglet	--	2	7	--	--	6	77	11	2
Water Pipit	--	--	--	--	--	--	20	--	--
Cedar Waxwing	--	20	--	--	1	41	110	9	15
Loggerhead Shrike	10	18	24	4	4	10	13	7	3
Starling	146	130	837	179	122	759	786	582	676
White-eyed Vireo	5	14	82	7	13	7	66	4	11
Yellow-throated Vireo	--	3	12	--	9	--	29	2	2
Solitary Vireo	--	--	1	--	--	--	4	1	8
Red-eyed Vireo	4	18	59	5	27	29	140	19	46
Warbling Vireo	3	1	13	--	--	--	2	--	3
Black-and-white Warbler	--	4	11	--	7	14	50	4	24
Prothonotary Warbler	10	2	29	--	4	1	4	2	--
Swainson's Warbler	--	--	--	--	--	--	1	--	--
Worm-eating Warbler	--	2	10	--	9	2	17	1	5

	REELFOOT	COLUMBIA	NASHVILLE	COOKEVILLE	T.O.S. MEETING	CHATTANOOGA	KNOXVILLE	GREENVILLE	ELIZABETHTON
Golden-winged Warbler	--	--	1	--	--	--	6	--	5
Blue-winged Warbler	--	4	32	--	2	2	4	--	2
Tennessee Warbler	--	14	14	--	18	--	19	1	5
Orange-cr. Warbler	--	--	--	--	--	--	1	--	--
Nashville Warbler	--	3	3	--	1	1	28	1	--
Parula Warbler	--	4	8	--	3	--	--	7	9
Yellow Warbler	1	8	48	3	10	15	61	13	34
Magnolia Warbler	--	1	--	--	5	10	1	--	--
Cape May Warbler	--	--	--	--	2	41	2	--	--
Black-thr. Blue Warbler	--	--	1	--	--	--	3	--	12
Myrtle Warbler	16	14	117	1	11	504	522	21	12
Black-thr. Green Warbler	1	1	--	--	1	--	40	15	6
Cerulean Warbler	--	19	17	--	1	--	24	--	--
Blackburnian Warbler	--	--	--	--	4	--	5	--	1
Yellow-throated Warbler	3	3	15	--	2	--	2	--	--
Chestnut-sided Warbler	--	3	--	--	2	--	10	4	23
Bay-breasted Warbler	--	1	2	--	7	--	1	--	--
Blackpoll Warbler	--	4	6	--	57	54	--	--	--
Pine Warbler	--	--	2	--	1	1	17	1	--
Prairie Warbler	3	9	34	--	34	6	75	6	1
Palm Warbler	5	20	27	1	3	157	22	7	3
Ovenbird	--	3	3	--	6	3	31	15	35
Northern Waterthrush	--	5	1	--	1	1	--	--	--
Louisiana Waterthrush	--	2	35	--	6	23	11	11	7
Kentucky Warbler	--	10	57	--	16	14	49	--	1
Connecticut Warbler	--	--	--	--	--	--	--	--	1
Yellowthroat	23	21	72	13	50	35	128	17	31
Yellow-breasted Chat	3	13	56	3	32	29	68	12	29
Hooded Warbler	--	3	6	--	18	20	22	5	13
Wilson's Warbler	--	--	--	--	1	1	--	--	--
Canada Warbler	--	--	--	--	2	1	7	--	14
American Redstart	--	4	12	--	11	--	17	3	5
House Sparrow	359	30	135	111	44	126	356	83	181
Bobolink	40	7	--	--	30	89	39	--	--
Eastern Meadowlark	38	55	349	136	81	110	636	161	222
Red-winged Blackbird	500	304	182	64	75	237	839	65	153
Orchard Oriole	2	6	71	3	11	11	58	11	14
Baltimore Oriole	19	2	17	--	2	1	6	7	7
Rusty Blackbird	--	--	3	--	--	8	1	--	3
Common Grackle	1,000	220	889	152	84	259	1,302	294	811
Br.-headed Cowbird	237	300	179	43	36	187	248	35	70
Scarlet Tanager	--	9	24	--	9	2	47	--	19
Summer Tanager	3	14	48	8	22	16	44	11	5
Cardinal	57	46	345	113	82	133	524	71	206
Rose-br. Grosbeak	--	15	11	1	12	11	31	3	21
Blue Grosbeak	1	2	1	--	7	14	12	3	1
Indigo Bunting	31	63	119	3	120	70	70	10	66
Dickcissel	21	4	--	1	6	--	--	--	--
Purple Finch	--	--	--	6	--	--	--	1	--
Pine Siskin	--	--	-	--	--	--	--	--	1
American Goldfinch	235	36	693	162	23	52	601	73	106
Ru.-sided Towhee	1	24	121	64	28	135	291	82	94
Savannah Sparrow	2	--	--	--	13	10	48	9	--
Grasshopper Sparrow	--	7	--	4	19	7	19	7	2
Vesper Sparrow	--	--	--	--	--	3	--	--	3
Lark Sparrow	--	--	--	--	2	2	--	--	--
Bachman's Sparrow	--	--	--	--	--	--	--	1	--
Slate-colored Junco	--	--	--	--	--	--	--	--	22
Chipping Sparrow	2	10	101	13	29	22	67	40	44
Field Sparrow	12	31	118	43	27	70	191	24	62
White-cr. Sparrow	4	28	9	22	10	4	54	20	5
White-thr. Sparrow	12	56	140	51	--	99	354	38	15
Lincoln's Sparrow	1	2	--	--	2	2	2	--	--
Swamp Sparrow	--	7	5	--	1	10	20	1	1
Song Sparrow	--	--	--	14	8	59	245	26	140
TOTAL SPECIES	**96**	**135**	**128**	**74**	**127**	**139**	**147**	**117**	**137**

KNOXVILLE—All of Knox County was included in the count, as in previous years. 28 April 1968; Overcast with temperatures from 50° to 68° F. The Least Bittern and Semipalmated Sandpipers were found by Beth Lacy. The bittern had been present several days. The Blue Goose, which appears on the list for the first time, wintered in the area with some semi-domesticated ducks, and was seen on the count by Mr. and Mrs. John Elson. The Green-winged Teal, also listed on the count for the first time, was found by Dr. J. C. Howell. The Upland Plover was found by Dr. James T. Tanner and Fred Alsop. The Olive-sided Flycatcher, Orange-crowned Warbler, and Lincoln's Sparrows were found by James M. Campbell and Danny Ellis. The Swainson's Warbler, the first county record except for television tower kills, was identified in some rhododendron on House Mountain by its song by Paul Pardue and Chris McMillan. It had been seen in the same area earlier by Pardue. Total Species: 147. Forty-seven observers. J. B. Owen (compiler).

GREENEVILLE—Same areas covered as on previous spring counts. 28 April 1968; Foggy to partly cloudy; temperature 55° F. 27 April 1968, 11:00 P.M. to 28 April 1968, 11:00 P.M. Total Species: 117. Nineteen observers.

Marjorie Clemens, Elva Darnell, Helen Bartnett, Mr. and Mrs. George Fisher, Mr. and Mrs. King Guat, Dr. J. S. Jeffers, David Johnson, John Lloyd, Mr. and Mrs. Roger Miller, J. S. McGuire, Joe Neill, Willie Ruth Nevius, Richard Nevius (compiler), Andy Seay, Dr. and Mrs. Royal Spees.

ELIZABETHTON—Most of Carter County was included on the count, along with adjacent parts of Johnson, Sullivan, Unicoi, and Washington Counties, to include Shady Valley, Boone, Patrick Henry, Watauga, and Wilbur Lakes, Roan Mountain (6285 ft), and Unaka Mountain (4957 ft.). 6:00 P.M. 4 May 1968 to 6:00 P.M. 5 May 1968. The weather was cloudy to partly cloudy and windy for most of the count period; temperature 48° to 72° F. The White-rumped Sandpipers were observed at close range (10 ft.) by Mrs. Harold Dillenbeck, Joy Dillenbeck, and Mrs. George Dove. The Connecticut Warbler was observed by E. E. Davidson. Fred W. Behrend heard the Pine Siskin on Roan Mountain. Total Species: 137. Charles R. Smith (compiler).

SAVANNAH—5 May 1968; clear, little wind except on Pickwick Lake, 40° to 80° F. The Mourning Warbler, our only sighting for this area, was watched by David Patterson from a distance of about 25 feet for about one minute. It showed some gray under the bill and a slight white fringe between the black bib and the yellow breast, was otherwise like the spring male illustration in *A FIELD GUIDE TO THE BIRDS,* by Roger T. Peterson. Total Species: 112. Five observers.

Jerry Mathis, David E. Patterson (compiler), Mike Patterson, John Williams, Bob Wint.

Pied-billed Grebe (1); Green Heron (1); Little Blue Heron (1); American Bittern (1); Blue-winged Teal (18); Wood Duck (2); Turkey Vulture (10); Red-tailed Hawk (5); Broad-winged Hawk (2); Osprey (1); Bobwhite (28); Sora (2); Semipalmated Plover (1); Killdeer (21); Common Snipe (1); Spotted Sandpiper (5); Solitary Sandpiper (10); Lesser Yellowlegs (3); Least Sandpiper (3); Mourning Dove (51); Chuck-will's-widow (7); Whip-poor-will (21); Common Nighthawk (8); Chimney Swift (17); Ruby-throated Hummingbird (5); Belted Kingfisher (4); Yellow-shafted

Flicker (4); Pileated Woodpecker (12); Red-bellied Woodpecker (19); Red-headed Woodpecker (2); Hairy Woodpecker (6); Downy Woodpecker (9); Eastern Kingbird (30); Great Crested Flycatcher (15); Eastern Phoebe (3); Acadian Flycatcher (7); Eastern Wood Pewee (12); Horned Lark (1); Rough-winged Swallow (25); Barn Swallow (26); Cliff Swallow (67); Purple Martin (15); Blue Jay (53); Common Crow (21); Carolina Chickadee (23); Tufted Titmouse (19); White-breasted Nuthatch (2); Brown Creeper (3); Bewick's Wren (26); Carolina Wren (10); Short-billed Marsh Wren (2); Mockingbird (3); Catbird (12); Brown Thrasher (17); Robin (15); Wood Thrush (38); Swainson's Thrush (2); Gray-cheeked Thrush (2); Eastern Bluebird (24); Blue-gray Gnatcatcher (26); Cedar Waxwing (4); Loggerhead Shrike (5); Starling (33); White-eyed Vireo (48); Yellow-throated Vireo (4); Red-eyed Vireo (6); Black-and-white Warbler (4); Prothonotary Warbler (19); Worm-eating Warbler (3); Blue-winged Warbler (18); Tennessee Warbler (5); Nashville Warbler (1); Parula Warbler (2); Yellow Warbler (2); Myrtle Warbler (4); Cerulean Warbler (3); Blackburnian Warbler (1); Yellow-throated Warbler (4); Blackpoll Warbler (4); Prairie Warbler (10); Palm Warbler (3); Ovenbird (8); Northern Waterthrush (5); Louisiana Waterthrush (11); Kentucky Warbler (7); Mourning Warbler (1); Yellowthroat (34); Yellow-breasted Chat (41); Hooded Warbler (2); American Redstart (2); House Sparrow (32); Eastern Meadowlark (46); Red-winged Blackbird (73); Orchard Oriole (11); Common Grackle (162); Brown-headed Cowbird (84); Scarlet Tanager (1); Summer Tanager (21); Cardinal (93); Rose-breasted Grosbeak (8); Blue Grosbeak (4); Indigo Bunting (98); Dickcissel (19); American Goldfinch (96); Rufous-sided Towhee (22); Savannah Sparrow (42); Grasshopper Sparrow (8); Chipping Sparrow (28); Field Sparrow (9); White-throated Sparrow (31); Lincoln's Sparrow (4); Swamp Sparrow (11).

(Editor's note: The SAVANNAH count arrived after the tables had been prepared, therefore it was necessary to set the count in paragraph form.)

CORRECTION

Under THE SEASON, Vol. 38, page 51, the *maximum number* of *Greater Yellowlegs* appearing in line one should read "6" instead of "16" for 17, 26 April. Mr. Kenneth Dubke called this error to the attention of the Editorial Staff.

T. O. S. ANNUAL MEETING, 1968

BY HELEN B. DINKELSPIEL, *Secretary*

The 53rd Annual Meetings of the Board of Directors of the Tennessee Ornithological Society was held at 1:30 P.M. on 11 May, 1968 in the Biology Building of Tennessee Technological University at Cookeville, Tennessee.

The meeting was called to order by Chairman of the Board, Robert W. McGowan, with thirty-four officers, directors, and proxies, present.

Copies of the minutes having been distributed to officers and directors present, Mr. John Ellis made a motion that the reading of the minutes be dispensed with. Motion was seconded and carried.

Treasurer: Miss Annella Creech, Treasurer, reported. A motion was made by Miss Alice Smith to accept the Treasurer's report as read. Motion was seconded and carried. A copy of the Treasurer's report will occur in a later issue of THE MIGRANT.

Editor: Dr. Lee Herndon reported on the problems involved in the publishing and mailing of THE MIGRANT, and suggested having a Business Manager.

Mrs. Ben Coffey made a motion that the Executive Officers meet with the Editorial Staff to find out what the duties of a Business Manager should be, and then meet with the Board to see if action could be taken before the end of the Cookeville meeting. The motion was seconded and carried.

Curator: Mr. Albert Ganier gave a report on the duties of a Curator.

Audit Report: Mr. John O. Ellis, Chairman of the Finance Commttiee, reported no irregularities in the Treasurer's records or books, and that adequate records were maintained. Copy of the Audit Report is attached to the Minutes.

Finance Committee: On Recommendations requiring action:

Item First: Mr. John Ellis, Chairman, made a motion that: "The motion voted by the 1950 Directors at the annual meeting of the Tennessee Ornithological Society, as reported in the June 1950 issue of THE MIGRANT, page 33, having to do with certain individual members, who, having been members of the Society for 35 years, or who, having been members for 25 years and having attained age 65, being declared members in good standing and no further payment of dues on their part required, applied only to those five individual members meeting such requirements as of the date of the action taken and was intended to honor only the founders of the Society living at that time." Motion was seconded and carried.

Item Second: Mr. John Ellis made a motion that the Proposed Budget for Year May 1968-May 1969 be approved, excepting deletion of the amount intended for reprints of articles, and this amount shifted to Reserve for Contingencies. The motion was seconded and carried. Detailed copy of Proposed Budget is attached to the Minutes.

Item Third: Mr. John Ellis made a motion that, effective for the year beginning 1 January 1969 the annual membership dues be increased as follows:

Type Membership	*Current Amount*	*New Amount*
Individual	$2.50	$3.00
Family	3.00	4.00
Corresponding (out of state)	2.00	3.00
Libraries and Subscribers	2.00	3.00

The motion was seconded and carried unanimously with 20 in favor and 0 opposed. Detailed copy of Report of Finance Committee is attached to the Minutes.

T.O.S. Arm Badges: Mrs. E. M. West, Chairman, reported on the amount transmitted to the Treasurer following the 1967 meeting and the amount transmitted in April 1968. Mrs. West also pointed out that the Chapters were not doing their duty to promote the patches and checklists. Mrs. Joe Moss, Jr., was introduced by Mrs. West. Mrs. Moss replaces Mrs. West, who will be leaving the state, as new Arm Badge Chairman.

Resolution: Miss Ella Ragland, Chairman of the Resolutions Committee, requested deferment of the reading of the Resolutions until the Business Meeting.

Membership Committee: Mr. Kenneth Dubke, Chairman, reported that the Membership Committee had not functioned in an organizational way, but had worked, as usual, on an individual basis.

Nominating Committee: Mrs. W. F. Bell, Sr., Chairman, through Miss Mary Davant, nominated Dr. George Mayfield, Jr. as President-elect. The nomination was approved for presentation to the Membership.

Finance Committee: May 1968-May 1969—The Board approved the membership for the Finance Committee for the ensuing year as follows: Mr. Henry Parmer, Chairman, Mr. Kirby Stringer, Mr. Eugene Cypert, Mr. Edward King, and Miss Annella Creech, Treasurer.

Conservation: Miss Louise Nunnally made a motion to accept the proposal of the President, Mr. Robert W. McGowan, that Mr. Mack Prichard, Parks Naturalist, Division of State Parks, act as coordinator of Conservation Activities of Tennessee Ornithological Society. Motion was seconded and carried.

There being no further business the meeting adjourned.

ANNUAL BUSINESS MEETING

The Annual Business Meeting of the Tennessee Ornithological Society was held in the Cafeteria of the Tennessee Technological University, Cookeville, Tennessee on 11 May 1968, following the Banquet.

The President, Mr. Robert W. McGowan, presided. He extended a welcome to all, with particular mention, and presentation, of the founders of the Tennessee Ornithological Society, Messrs. Dixon Merritt and Albert Ganier, as well as Mrs. George Mayfield, Sr., wife of one of the founders of the Society. Mr. McGowan expressed his appreciation for the fine organization and all the effort put forth by the members of the Upper Cumberland Chapter, at Cookeville, to make the meeting a success. There were 151 present.

The following former presidents of the Tennessee Ornithological Society were introduced:

Mrs. Ben B. Coffey, Mr. Ben B. Coffey, Mrs. Harold Garlinghouse, Mr. Paul Pardue, Mr. Albert Ganier, and Dr. Lee Herndon.

With the consent of the membership present, the minutes of the 1967 Business meeting were dispensed with.

Miss Annella Creech, Treasurer, gave a summary of her report as made to the Board of Directors, and announced that copies of the Treasurer's Report were available at the meeting. The Treasurer's report was approved as read.

Mr. Dixon Merritt made a motion to accept the recommendation of the Executive Officers and the Editorial Staff to hire an individual for circulation services to the Editorial Staff, to prepare labels, make file card changes, stuff, sort, and mail THE MIGRANT. The motion was seconded and carried.

Mrs. Edward Carpenter made a motion to accept the recommendation of the Board of Directors to increase dues, 1 January 1969. The motion was seconded and carried.

Mr. Wallace Coffey, Vice President from East Tennessee, extended an invitation from East Tennessee for the meting in 1968, with details to be forthcoming.

Dr. Katherine Goodpasture, State Coordinator for the U. S. Fish and Wildlife Cooperative Breeding Survey, gave a report on the survey made in 1967. The Survey showed an increase of 3000 birds on the routes covered, with four additional routes having been added over the previous year. Dr. Goodpasture requested that routes be covered for 1968 before June 20, if possible.

Miss Ella Ragland, Resolutions Chairman, read the Resolutions of her Committee, copy of which is attached to the Minutes. Dr. Cummins made a motion to accept the Resolutions. The motion was seconded and carried.

Miss Mary Davant, acting for Mrs. W. F. Bell, Sr., Chairman of the Nominating Committee, presented the name of Dr. George Mayfield, Jr., as President-elect for 1968-1969, as approved by the Board. The nomination of Dr. Mayfield was accepted.

Mrs. Bryon Paul, President of the Lebanon Chapter, gave a report, written by Mrs. Dixon Merritt, on the establishment of a Bird Sanctuary in Lebanon, with details concerning the work done in the schools with poster contests on birds, and the effort put forth to educate the public concerning protection of bird life, and conservation.

Mr. McGowan introduced the speaker, Mr. Arthur Stupka, retired Park Naturalist of the Smoky Mountain National Park, who gave an illustrated talk on "Through the Year in the Great Smoky Mountain National Park."

There being no further business, the meeting adjourned.

STEERING COMMITTEE

M. R. Richmond, Program-Housing, General Arrangements
Members of this committee: Mr. F. R. Toline, Mr. Robert Toline

Mr. Bill Jones, Field Trips

Mr. Don Collier, Field Trips
Members of this committee: Mr. Roy Hines, Dr. P. L. Hollister, Dr. Morehead

Miss Marie White, Food Service
Members of this committee: Miss Chrissa Wendt, Mrs. James Haile, Mrs. F. R. Toline, Miss Elizabeth Killefer

Miss Beulah Clark, Registration and Finance
Members of this committee: Mrs. Betty Williams, Mrs. E. B. Knight, Mrs. J. T. Moore, Mrs. Glen Myriek, Mrs. Amy Johnson, Mrs. Thelma Tinnon, Mr. Glen Myriek, Dr. John O. Cummins

Mrs. John O. Cummins, Public Relations, Publicity
Members of this committee: Dr. Sidney McGee, Mrs. Sidney McGee

RESOLUTIONS

The members of the Tennessee Ornithological Society, having assembled at its 53rd annual meeting 10, 11, 12 May 1968, and having been graciously entertained by the Cookeville Chapter wish to express their appreciation to the following:

To our host chapter

To the president, the chairmen and appointed members of each committee.

To each member of the Cookeville organization who worked diligently to make the meeting a success.

To the administrative staff of the Tennessee Technological University and the participating personnel of the Biology Department.

Resolved that we acknowledge the value of those who are responsible for the coordination and presentation of the informative program and the officers who have worked to further the success of the T.O.S.

Be it further resolved that our thanks be extended to the speakers of the Paper Session, Dr. P. L. Hollister presiding: Mr. Fred J. Alsop III, Mr. Kenneth H. Dubke, Dr. Katherine Goodpasture, Mr. Albert Ganier, and to the speaker at our banquet, Mr. Arthur Stupka.

And be it resolved that special recognition be accorded our founders, Mr. Dixon Merritt and Mr. Albert Ganier for their continued interest and inspiration.

Ella Ragland, Mary Davant, Norine Smith

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THE SECOND ANNUAL TENNESSEE ORNITHOLOGICAL SYMPOSIUM

The second annual symposium is to be held 26-27 October 1968 at the Pete Smith's Watts-Bar Resort, Watts Bar Dam, Tennessee. Phone: 365-6638. The symposium begins Saturday at 12:00 noon EST and concludes following a breif field trip to nearby Hiwassee Island to view the waterfowl concentrations, early Sunday afternoon. At least seven speakers are committed for this year's program which will focus attention on various research projects currently being carried out and dealing with areas that participants may wish to explore. The symposium is strictly informal with the greates emphasis placed upon round table discussions and the advancement of field studies in Tennessee.

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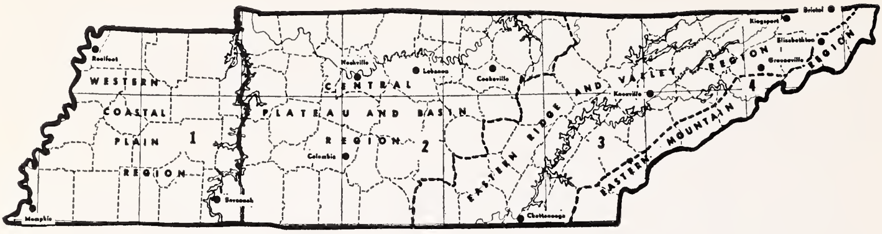
THE PURPOSE AND SCOPE OF "THE SEASON"

BY CHARLES R. SMITH



Beginning with this issue of THE MIGRANT, you will notice a new format for "*The Season.*" The state has now been divided into four natural physiographic regions with season reports representing each of these regions. The arrangement of these regions can be seen on the accompanying map. Since it is hard to say definitely and exactly where one natural region ends and another begins, the boundaries of these regions are of necessity only approximations and follow county lines merely as a means to make orientation convenient. All available references on the natural physiographic regions of the United States were consulted before the present arrangement for Tennessee was determined. Those regions indicated on the map of Tennessee are continuous throughout most of the adjoining states.

By this time you are probably wondering why the regional system was adopted for seasonal reporting purposes. Prior to this time, all season reports have been designated by the city from which they were submitted. Unfortunately, this method of reporting was based on political boundaries rather than natural barriers. As you will probably realize, birds do not and can not recognize political boundaries such as city limits, county lines, and state lines. They can and do, however, conform in some way to those geographic features which form natural barriers to their movement. Also, accompanying these geographic features are climatic conditions which tend to restrict certain bird species to specific areas. Vegetational differences also accompany these geographic and climatic differences and contribute to the habitat requirements of certain species of birds. Some species, such as the Starling, can adapt to almost any type of habit situation, but other species, such as the Raven, are more restricted in their range. Our present regional system is designed so that a more logical and natural association is established between bird species and the natural regions in which they normally occur.

"*The Season*" is now organized so that each region has a single Regional Coordinator who collects the information from his region to go into "*The Season.*" The names and addresses of these coordinators will be found along with their regional reports in "*The Season.*" For our purposes, the seasons as reported in THE MIGRANT are arranged chronologically as follows: spring (February, March, April), summer (May, June, July), fall (August, September, October), winter (November, December, January). As members of the Tennessee Ornithological Society, it is the responsibility of each of you to submit information on your observations of birds to your regional coordinators for publication in THE MIGRANT. You can send information in any form, post card or letter, typed or handwritten, to the Regional Coordinator for that region in which you made the observation. Be sure that your report of an observation gets to the Regional Coordinator during the season (as noted above) in which you made the observation and contains at least the following information: name of bird, when it was seen, who saw it, where it was seen (be as exact as possible), and how many were seen. The value of observations submitted without all of the preceeding information is very limited, and it is doubtful that observations submitted without such information could even be used in some cases. It is imperative that only information for "*The Season*" be sent to Regional Coordinators. All other material should go to the Editorial Staff for publication. With your help, we will be able to prepare "*The Season*" more thoroughly and record information more adequately for anyone who needs such information for any reason in the future. "*The Season*" is the only part of *THE MIGRANT* devoted wholly to the routine observations of the membership of the T.O.S. It is your duty to provide those who prepare "*The Season*" with the information needed to make it useful to future researchers and to give us an adequate picture of the present status of the birds of Tennessee.

THE SEASON

CHARLES R. SMITH, *Editor*

Those reports which follow include data from the period from 1 February through 30 April 1968. The month of February was unseasonably cold and dry. Records of the U. S. Weather Bureau indicate that February 1968 was the driest February since 1941. Daily temperatures were consistently below normal, with the exception of a brief period of mild weather around the third of the month. East Tennessee was the driest section of the state, with precipitation totals averaging as much as four inches below the normal levels for February.

March and April were generally average with respect to the weather. A snowstorm over the West and Middle portions of the state from 21-23 March left from six to sixteen inches of snow in most areas, with Memphis experiencing its second heaviest snowfall on record. The Eastern portion of the state experienced only snow flurries during the above period. Where there was heavy snow, considerable damage was done to shrubs and trees. Temperature and precipitation levels for the month of April were approximately normal in most areas.

Some of the more noteworthy records for this season follow, along with the areas in which they occurred: Western Coastal Plain: Rough-legged Hawk at Dyersburg, Purple and Common Gallinules at Reelfoot, Henslow's Sparrow at Savannah. Central Plateau and Basin: Little Blue Heron at Old Hickory Lake, Harris' Sparrow at Nashville. Eastern Ridge and Valley: Cattle Egrets at Chattanooga and Greeneville, Barnacle Goose at Knoxville (appears to be the first state record of that species), White-winged Scoters throughout most of the region, increasing records of Greater Scaup, with more people concentrating on proper identification of this species, Peregrine Falcon and Pigeon Hawk near Knoxville ,Purple Gallinule at Oak Ridge, Red-cockaded Woodpecker near Chattanooga, Tree Sparrows at Knoxville and Johnson City. Eastern Mountains: Pine Siskins and Red Crossbills in The Smokies (hardly any reported from other regions during this period). The Central Plateau and Basin Region reported that the waterfowl populations were very small for this period and that the warbler migration was very poor. Northern finches remained scarce or nonexistant throughout all regions of the state for this report period. Further details of the above observations will be found in the following season reports under their appropriate regional headings.

WESTERN COASTAL PLAIN REGION—*Grebes-Mergansers:* Horned Grebe: 10 Feb. (1) S. Pied-billed Grebe: 28 Feb. (1), 5 Apr. (5) R, all season (1-6) S. Double-crested Cormorant: 8 Mar. (1), 25 Mar. (9) R. Great Blue Heron: 31 Mar. (5), 13 Apr. (3) R, 28 Apr. (1) S. Green Heron: 8 Apr. (1) R. Little Blue Heron: 31 Mar. (1), 13 Apr. (2) R. Cattle Egret: 18 Apr. (20) R (BS), 27 Apr. (69) R (EC, MLC). Common Egret: 31 Mar. (11), 13 Apr. (2) R. Black-crowned Night Heron: 6 Apr. (2) R. Yellow-crowned Night Heron: 6 Apr. (2) R. Canada Goose: 23 Feb. (13,000) R (RR). Snow Goose: 8 Mar. (3) R. Blue Goose: 8 Mar. (7) R. Mallard: 29 Mar. (110), 27 Apr. (156) R. Black Duck: 4 Feb. (100), 22 Mar. (10) R. Gadwall: 4 Feb. (125), 22 Mar. (10) R. Pintail: 9 Feb. (115), 15 Mar. (15) R. Green-winged Teal: (23 Feb. (40) R (RR). Blue-winged Teal: 29 Mar. (1,100) R. American Widgeon: 29 Mar. (450) R. Shoveler: 29 Mar. (650) R. Wood Duck: 29 Mar. (750) R, 22 Apr. nest. Lesser Scaup: 29 Mar. (325) R. Common Goldeneye: 16 Feb. (15) R. Bufflehead: 4 Feb. (10) R. Hooded Merganser: 31 Mar. (2), 13 Apr. (1) R. Red-breasted Merganser: 27 Apr. (2) R.

Hawk-Owls: Cooper's Hawk: 15 Mar. (1) D (KL). Broad-winged Hawk: 9 Apr. (1) S. Rough-legged Hawk: 27 Mar. (1) D (KL). Bald Eagle: 11 Feb. (3) R. Marsh Hawk: 3 Feb. (1) S, 31 Mar. (1) R. Sora: 29 Apr. (1) R. Purple Gallinule: 29 Apr. (1) R (RR). Common Gallinule: 8 Apr. (1) R (RR). American Coot: 29 Mar. (3,100) R. Golden Plover: 30 Mar. (30) S. Common Snipe: 26 Apr. (2) R. Spotted Sandpiper: 27 Apr. (3) R, (2) S. Solitary Sandpiper: 20 Apr. (8) (1) S, 27 Apr. (9) R. Greater Yellowlegs: 27 Apr. (5) R. Lesser Yellowlegs: 3 Apr. (2) R. Pectoral Sandpiper: 27 Apr. (3) R (EC, MLC). Least Sandpiper: 27 Apr. (6) R. Herring Gull: 27 Apr. (3) S, 29 Apr. (2) R. Ring-billed Gull: 29 Apr. (3) R, all season (25) S. Great Horned Owl: 31 Mar. (1) R. Barred Owl: 31 Mar. (2) R. Short-eared Owl: (1-3) M (BH).

Goatsuckers—Vireos: Chuck-will's-widow: 18 Apr. (1) S. Whip-poor-will: 18 Mar. (1), next 29 Mar. (1) S. Chimney Swift: 1 Apr. (6) R. Eastern Kingbird: 8 Apr. (1), 13 Apr. (2) S. Great Crested Flycatcher: 17 Apr. (2) S. Least Flycatcher: 19 Apr. (1) S (DP, banded). Eastern Wood Pewee: 31 Mar. (2) R (JL, KL), 18 Apr. (1) S. Tree Swallow: 31 Mar. (50) R, 13 Apr. (1,000) R. Cliff Swallow: 6 Apr. (5) S. Purple Martin: 12 Mar. (4) S. Fish Crow: 16 Mar. (5) R (MLC). Wood Thrush: 8 Apr. (2) S.

Warblers: Worm-eating: 13 Apr. (2) S. Blue-winged: 13 Apr. (6) S. Tennessee: 4 Apr. (1) S (DP), then from 21 Apr. on. Cerulean: 13 Apr. (3) S. Blackpoll: 13 Apr. (1) S. Pine: 10 Mar. (5) singing, S. Prairie: 7 Apr. (1) S. Ovenbird: 11 Apr. (1) S. Connecticut: 19 Apr (2) LL (JL, KL). Yellowthroat: 6 Apr. (1) S. Hooded: 9 Apr. (1) S.

Bobolink-Sparrows: Bobolink: 27 Apr. (30) S. Western Meadolark: 2 Feb. (1), 2 Mar. (1) R. Orchard Oriole: 14 Apr. (1). Scarlet Tanager: 11 Apr. (1), 13 Apr. (2) S. Blue Grosbeak: 20 Apr. (2) R, 20 Apr. (2) S. Pine Siskin: 23 Mar. (10), 6 Apr. (1) S. Henslow's Sparrow: 6, 7 Apr. (1) S (banded, DP). Vesper Sparrow: 23 Mar. (4), 2 Apr. (1) S. Lincoln's Sparrow: 27 Apr. (1) R.

Locations: D-Dyersburg LL-Land-Between-the-Lakes, M-Memphis, R-Reelfoot Lake and Tiptonville, S-Savannah.

Observers: BC-Ben Coffey, EC-Eugene Cypert, MLC-Mary Louise Cypert, BH-Bob Holt, JL-Janice Leggett, KL-Kenneth Leggett, JM-Jerry Mathis, DP-David Patterson, MP-Mike Patterson, RR-Reelfoot Refuge Personnel, BS-Betty Sumara.

DAVID E. PATTERSON, Harbart Hills Academy, Olive Hill 38475.

CENTRAL PLATEAU AND BASIN REGION—*Grebes-Rails:* Pied-billed Grebe: 30 Apr. (1) adult with (6) small young RL (MCW), 2nd. NA nesting record. Great Blue Heron: very scarce. Green Heron: 9 Apr. (3) RL (MCW). Little Blue Heron: 25 Mar. (1) OHL (MCW), 22 days earliest ever for these summer visitors. Geese: no reports. Ducks: very scarce. Broad-winged Hawk: 30 Mar. (1) PWP (LOT), 2nd. March record NA. Golden Eagle: 2 Mar. (2) one mile north WB (MCW). Marsh Hawk: almost absent. Sparrow Hawk: from normal to very scarce by end of period. Bobwhite: seemed more plentiful in NA. American Coot: scarce OHL, (100) wintered RL (MCW). Killdeer: very scarce.

Sandpipers-Thrushes: Common Snipe: 25 Mar. (2) OHL (MCW), only report. Solitary Sandpiper: several late Apr. records; almost no other shorebird reports. Ring-billed Gull: scarce, with OHL reports of (25) 31 Jan. down to (9) 23 Apr. (LOT). Yellow-billed Cuckoo: late and fairly scarce. Whip-poor-will: 28 Mar. (1) home (HCM). Common Nighthawk: 18 Apr. (1) home (HCM). Chimney Swift: 4 Apr. (6) home (HCM), a week later than average. Ruby-throated Hummingbird: 14 Apr. (1) home (JC). Red-headed Woodpecker: very scarce during usual Apr. movement. Yellow-bellied Sapsucker: 27 Apr. (1) RL (MCW). Eastern Kingbird: plentiful in late Apr. Least Flycatcher: 23 Apr. (1) banded TJ's (KAG). Wood Pewee: 17 Apr. (1) RL (MCW), ties earliest record. Tree Swallow: 24 Mar. (2) RL (MCW). Rough-winged Swallow: 24 Mar. (1) SHV (KAG, HCM). Barn swallow: 27 Mar. (1) OHL (MCW). Cliff Swallow: 27 Apr. (40) pairs building nests RR (AFG). Purple Martin: 12 Mar. (3) home WB (MCW). Winter Wren: 11 Apr. (1) BS (KAG). Transient thrushes: fairly common.

Vireos-Warblers: Vireos: below normal and a few days later than average: Blue-winged Warbler: 9 Apr. (2) RL (MCW). Tennessee: late and scarce, 25 Apr. (3) home (MCW). Yellow: 9 Apr. (1) MBP (MCW). No reports of Magnolia, Black-throated Green, Bluckburnian, Chestnut-sided, or Bay-breasted. Blackpoll: 27 Apr. (2) RL (MCW). Palm: 17 Apr. (1) RL (MCW). Palm: 17 Apr. (1) RL (MCW). Northern Waterthrush: early, 7 Apr. (1) home (NE). Louisiana Waterthrush: 15 Mar. (1) BS (KAG). Yellowthroat: 9 Apr. (1) RL (MCW). Hooded: 12 Apr. (1) home (JOE). Redstart: 11 Apr. (2) BS (KAG). It was a very poor warbler migration.

Blackbirds-Sparrows: Bobolink: no reports. Orioles: late and scarce. Rusty

Blackbird: 27 Apr. (1) FV (AC), (2) TJ's (HCM, HEP), 28 Apr. (1) TJ's (HEP), nine days latest ever NA. Common Grackle: unusually common at beginning of their nesting season. Scarlet Tanager: 14 Apr. (1) BS (KAG). Rose-breasted Grosbeak: very scarce. Blue Grosbeak: 27 Apr. (1) CW (SB). Indigo Bunting: 17 Apr. (2) SHV (KAG). Lark Sparrow: 10 Apr. (1) Murfreesboro (HCM). Slate-colored Junco: still well below normal. Tree Sparrow: 23 Mar. (4) home (FM). Harris' Sparrow: 11, 14, 15 Feb. (1) home (HH). White-throated Sparrow: still scarce through period. Swamp Sparrow: 27 Apr. (1) TJ's (HEP).

Locations: BS—Basin Springs, CW—Cheekwood, FV—Fernvale, MBP—Montgomery Bell Park, NA—Nashville Area, OHL—Old Hickory Lake, PWP—Percy Warner Park, RL—Radnor Lake, RR—River Road, SHV—South Harpeth Valley, TJ's Two Jays Sanctuary, WB—Woodbury, Tenn.

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EASTERN RIDGE AND VALLEY REGION—*Loons-Mergansers:* Common Loon: regular throughout period, max. 15 Apr. (9) SHL (WC). Horned Grebe: regular, max, and last 31 Mar. (52) FLL (JMC, CM). Green Heron: first 14 Feb. (1) FLD (PP). Cattle Egret: 5 Apr. (1) AM (JD), 15-25 Apr. (15) G (RN). Common Egret: 4 Apr. (1) CL (PP). 22 Apr. (1) LC (DJ). Black-crowned Night Heron: 31 Mar. (1) G (RN), 24 Apr. (15) nesting C (PP), 29 Apr. (1) CL (PP). Yellow-crowned Night Heron: 31 Mar. (1) G (RN). 13, 29 Apr. (2) HM (PP), 14 Apr. (4) nesting AM (KD). Least Bittern 4 Apr. (1) K (JBO), 26 Apr. (1) K (PP). American Bittern: 5 Apr. (1) AM (JD), 15 Apr. (1) N (PP). Canada Goose: regular throughout period; max. (400) CL (FO) until 17 Mar.; small numbers between CL and CH throughout entire period. Barnacle Goose: 11 Feb.-17 Mar. (2) CL (TK, KOS), first state record. White-fronted Goose: 25, 27, 29 Mar. (1) HRA (KD, PP, RS). Snow Goose: 1 Feb.-17 Mar. (4) CL (FO). Blue Goose: throughout period (1) K (JE), 18, 25, 29 Mar. (1) HRA (KD, RS). Mallard: regular through 10 Apr. (2) BC (PP); max. 13 Feb. (425) HRA (KD.) Black Duck: regular through 27 Apr. (1) K (PP); max. 17 Feb. (20) K (JMC, RME). Gadwall: regular through 14 Apr. (3) A M(KD); max. 24 Feb. (70) FLL (JMC, RME). Pintail: scattered records 17 Feb.-31 Mar.; max. (1) during that period FLL. Green-winged Teal: small numbers throughout period; max. 19 Feb. (10) CL (PP). Blue-winged Teal: regular in small numbers 19 Mar.-30 Apr.; first 19 Mar. (4) SHL (WC); max. 5 Apr. (45) AM (JD). American Widgeon: regular throughout period; max. 12 Mar. (117) HRA (KD). Shoveler: small numbers through 14 Apr. (2) AM (KD); max. 1 Apr. (12) CL (PP). Redhead: regular in small numbers through 25 Mar. (2) BL; max. 7 Mar. (49) ChL (PP). Ring-necked Duck: regular through 30 Mar. (2) SHL (WC). Canvasback: only on 11 Mar. (3) CL (PP). Greater Scaup: 18 Feb. (60) FLL (FA), Mar. (258) BWP (JD). Lesser Scaup: regular throughout period; max.

31 Mar. (375) CH (JD) and 3 Apr. (450) FLD (PP). Commno Goldeneye: regular through 23 Mar. (6) BWP (JD); max. 24 Feb. (125) BL (CRS). Bufflehead: regular throughout period; max. 27 Mar. (106) HRA (PP). Oldsquaw: 26 Feb. (3) SHL (WC, BS), 3 Apr. (1) FLD (PP). White-winged Scoter: 3 Feb. (7) PHL (WC, TWF, AS), 7 Feb. (2) BL (HD), 24 Feb. (15) BL (WC, LRH, CRS), 24 Mar. (6) BL (LRH), 16, 26 Feb., 23 Mar. (1) BWP (JD, KD), 31 Mar. (5) FLL (JMC, CM), 27 Apr. (2) FLL (CM). Ruddy Duck: 31 Mar. (2) BWP (JD), 1 Apr. (1) CL (PP). Hooded Merganser: regular in small numbers through 14 Apr. (2) AM (KD); max. 13 Mar. (11) C (PP). Common Merganser: 26 Feb. (2) BL (GD, HD). Red-breasted Merganser: 19 Mar. (4) SHL (WC), 31 Mar. (2) BWP (JD), 3 Apr. (8) FLD (PP).

Vultures-Sandpipers: Turkey Vulture: regular throughout the period; max. 23 Mar. (15) K (PP). Black Vulture: very few records; max. 12 Mar. (11) SHL (WC). Sharp-shinned Hawk: 9 Mar. (1) K (PP), 15 Apr. (1) CL (PP). Red-tailed Hawk: present in small numbers throughout period; active nest site 15 Apr. (2 adults) B (WC, BS); two active nest sites (no dates) Ch (KD). Red-shouldered Hawk: 25 Feb. (1) K (PP). Broad-winged Hawk: from 14 Mar. (1) OR (PP) through the period. Golden Eagle: 2 Feb. (2) near FLD (MS), 4 Mar. (1) HRA (KD). Bald Eagle. 21, 26 Feb. (1) BL (GD, HD), 4 Mar. (1) BWP (KD), 27 Apr. (1) NL (HC). Marsh Hawk: 5 Feb. (1) BL (GD, HD), 11 Feb. (1) K (PP), 18 Mar. (1) HRA (KD). Osprey: from 24 Mar. (1) K (FA) through period in small numbers. Peregrine Falcon: 24 Feb.-2 Mar. (1) K (FA, CM, PP). Pigeon Hawk: 29 Mar. (1) HRA (RS). Sandhill Crane: 20 Mar. (11) K (MS). King Rail: 24 Mar. (1) AM (MC). Sora: a few records from 5 Apr. (1) AM (JD) through period. Purple Gallinule: 22-25 Apr. (1) OR (JMC). American Golden Plover: 23 Mar. (125) and 24 Mar. (30) K (PP, BW, IW), 25 Mar. (22) SB, HRA (KD). Black-bellied Plover: 15 Apr. (1) SHL (WC, BS). American Woodcock: a few records throughout period; family group 29 Apr. (4) SHR (WC). Common Snipe: present throughout period; max. 5 Apr. (75) AM (JD). Spotted Sandpiper: first 15 Apr. (1) SHL (WC, BS). Solitary Sandpiper: first 23 Mar. (1) K (FA, JMC, RME). Greater Yellowlegs: first 11 Mar. (2) B (KD). Lesser Yellowlegs: first 17 Mar. (4) SB (AW). Pectoral Sandpiper: first 11 Feb. (1) K (CM), max. 25 Mar. (89) SB (KD). Least Sandpiper: 25 Mar. (40) SB, HRA (KD). Dunlin: 25 Mar. (86) RHA (KD).

Gulls-Pipits: Herring Gull: max. 26 Feb. (20) SHL (WC); last 29 Apr. (1) SHL (WC, BS). Ring-billed Gull: regular throughout period; max. 18 Feb. (300) FLL (FA). Bonaparte's Gull: 23 Mar. (22) BWP (JD), 25 Mar. (4) CH (KD); five records Knoxville area between 28 Mar. and 9 Apr., with max. 3 Apr. (149) FLD (PP). Barn Owl: 9 Mar. (1) JC (MER, CRS), 15 Mar. (1) K (PP), 26 Mar. (1) G (RN); one bird regularly at AM (JD, KD). Great Horned Owl: 4 Feb. (1) BL (WC, CRS), 14 Feb. (1) SHL (WC), 25 Mar. (1) G (RN), 27 Apr. (1) H (JD). Chuck-will's-widow: first 13 Apr. (4) K (PP). Whip-poor-will: first 15 Apr. (1) K (PP). Common Nighthawk: first 31 Mar. (1) G (RN), extremely early. Chimney Swift: first 5 Apr. (10) AM (JD). Red-cockaded Woodpecker: 26 Mar. (2) TRG (KD). Eastern Kingbird: first 31 Mar. (1) G (RN). Tree Swallow: first 22 Mar. (28) SB (KD). Bank Swallow: 27 Apr. (28) K (CM), 30 Apr.

(7) TRG (KD), 30 Apr. (30) ND (PP). Rough-winged Swallow: first 18 Mar. (1) K (MS). Barn Swallow: first 18 Mar. (1) ND (PP). Cliff Swallow: first 5 Apr. (4) AM (JD). House Wren: a few scattered records throughout the region except for CH; first 31 Mar. (1) K (FA). Winter Wren: a few scattered records throughout region, except the northeast portion; last 5 Apr. (1) CH (JD). Long-billed Marsh Wren: 26 Apr. (1) K (PP). Short-billed Marsh Wren: 22 Apr. (1) HRA (KD). Catbird: first 15 Apr. (1) K (SS). Brown Thrasher: a few scattered records of wintering birds throughout the region and report period. Wood Thrush: first 2 Apr. (1) OR (TM). Hermit Thrush: last 17 Apr. (1) JC (GD, HD). Swainson's Thrush: 23 Apr. (1) K (MM). Biue-gray Gnatcatcher: first 30 Mar. (2) K (JMC, RME). Water Pipit: a few scattered records throughout period.

Vireos-Warblers: White-eyed Vireo: first 3 Apr. (1) FLD (PP). Yellow-throated Vireo: first 11 Apr. (1) K (PP). Solitary Vireo: first 30 Mar. (1) K (JMC, RME). Philadelphia Vireo: 29 Apr. (2) ND (PP). Warbling Vireo: 21 Apr. (1) K (JMC *et al.*). Black-and-white Warbler: first 27 Mar. (1) CH (KD). Prothonotary Warbler: first 11 Apr. (1) K (CM). Swainson's Warbler: 18 Apr. (1) K (PP). Worm-eating Warbler: first 15 Apr. (1) K (RME). Golden-winged Warbler: first 16 Apr. (1) K (RME). Blue-winged Warbler: first 16 Apr. (1) K (RME). Tennessee Warbler: first 25 Apr. (1) K (PP). Orange-crowned Warbler: 21 Apr. (1) K (JMC, RME, CM, ES). Nashville Warbler: first 20 Apr. (2) K (JMC, RME). Parula Warbler: first 16 Apr. (1) CH (KD), 16 Apr. (1) K (RME). Yellow Warbler: first 29 Mar. (1) G (RN). Cape May Warbler: 20 Apr. (1) K (JMC, RME). Black-throated Blue Warbler: 20 Apr. (1) K (RME). Myrtle Warbler: regular throughout period in most of region. Black-throated Green Warbler: first 15 Mar. (1) K (PP). Cerulean Warbler: first 16 Apr. (1) TRG (KD). Blackburnian Warbler: first 20 Apr. (2) K (JMC, RME). Yellow-throated Warbler: first 15 Apr. (1) ND (PP). Chestnut-sided Warbler: 16 Apr. (1) K (RME). Blackpoll Warbler: first 26 Apr. (1) K (PP). Pine Warbler: first 25 Mar. (1) ND (PP). Prairie Warbler: first 10 Apr. (1) K (CM). Palm Warbler: first 28 Mar. (8) G (RN). Ovenbird: first 15 Apr. (1) K (CM). Northern Waterthrush: 20 Apr. (1) Col (RS), 22 Apr. (1) CL (PP). Louisiana Waterthrush: first 21 Mar. (1) Col (RS). Kentucky Warbler: first 16 Apr. (1) K (RME). Yellowthroat: first 31 Mar. (1) G (RN). Yellow-breasted Chat: first 16 Apr. (1) K (RME). Hooded Warbler: first 9 Apr. (1) Col (RS). Canada Warbler: first 20 Apr. (1) CH (KD). American Redstart: first 10 Apr. (10) K (CM).

Icterids-Sparrows: Bobolink: 27 Apr. (15) K (PP). Orchard Oriole: first 11 Apr. (1) N (FO). Baltimore Oriole: first 28 Apr. (1) B (WC). Rusty Blackbird: present througtout period in small numbers in middle and lower portions of region. Scarlet Tanager: first 13 Apr. (1) K (BSh). Summer Tanager: first 17 Apr. (1) K (MM). Rose-breasted Grosbeak: first 18 Apr. (1) K (MS). Blue Grosbeak: first 17 Apr. (1) K (PP). Indigo Bunting: first 18 Apr. (1) Col (RS). Dickcissel: 12 Feb. (1) G (RN). Purple Finch: very small numbers until 17 Apr. (3) CH (KD). Pine Siskin: 19 Mar. (1) Col (RS), 19 Apr. (18) and 23 Apr. (9) CH (KD). Savannah Sparrow: present throughout period; max. 24 Mar. (25) K (PP). Vesper Sparrow: first 19 Mar. (3) B (WC), last 27 Apr. (3) K (PP). Bachman's Sparrow: 27 Mar. (1) K (PP), 31 Mar. (1) G (RN). Slate-colored Junco: present until 11

Apr. (6) B (WC). Tree Sparrow: 8 Feb.-24 Mar. (8) K (PP, KOS), 18 Feb. (2) CL (PP), 1 Mar. (4) JC (HEP), 2 Mar (3) JC (LRH, HEP, CRS). Chipping Sparrow: first 4 Feb. (1) K (CM). White-crowned Sparrow: present throughout period; max. 10 Apr. (6) K (PP). Fox Sparrow: scattered reports until 20 Apr. (1) Col (RS). Lincoln's Sparrow: 19 Feb. (2) CL (PP), 8, 14 Mar. (1) OR (PP). Swamp Sparrow: present throughout period in small numbers.

Locations: AM—Amnicola Marsh, Chattanooga, BC—Blount County, BWP—Booker T. Washington State Park; BL—Boone Lake, B—Bristol, CH—Chattanooga, ChL—Cherokee Lake, Col—Collegedale, C—Concord, CL—Cove Lake, FLD—Fort Loudon Dam, FLL—Fort Loudon Lake, G—Greeneville, HRA—Hiwassee River Area, H—Hixson, HM—House Mountain-Knox, JC—Johnson City, K—Knoxville, LC—Lick Creek, Greeneville, MP—CcClure's Pond-Knox, NL—Nickajack Lake, N—Norris, ND—Norris Dam, OR—Oak Ridge, PHL—Patrick Henry Lake, RB—Red Bank, SB—Savannah Bay, SHL—South Holston Lake, SHR—South Holston River, TRG—Tennessee River Gorge, WBL—Watts Bar Lake.

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EASTERN MOUNTAIN REGION—*Grebes-Sandpipers:* Pied-billed Grebe: 10 Mar. (6) LL (PP). American Bittern: 30 Mar.-28 Apr. (1) MC (CRS). Mallard: max. 17 Feb. (24) WaL. Black Duck: max. 17 Feb. (36) WaL, 13 Feb. (75) CL (PP). Wood Duck: 10 Mar. (3) CC (PP) Ring-necked Duck: max. 17 Feb. (53) WiL, 10 Mar. (18) LL (PP). Canvasback: only on 17 Feb. (1) WaL (LRH, CRS). Common Goldeneye: 13 Feb. (3) CL (PP). Bufflehead: max. 3 Feb. (66) WiL. Ruddy Duck: 18 Feb. (1) LL (PP). Hooded Merganser: 13 Feb. (5) CL (PP), 10 Mar. (7) LL (PP). Turkey Vulture: 10 Mar. (25) CC (PP). Sharp-shinned Hawk: 13 Apr. (1) RM (CRS). Red-tailed Hawk: 10 Mar. (1) CC (PP), 29 Mar. (1) RM (CRS). Red-shouldered Hawk: 31 Mar., 7 Apr. (1) LPN (FWB). Broad-winged Hawk: first 17 Apr. (2) Golden Eagle: 25 Feb. (1) CC (DKH), through 10 Mar. when last seen by (KOS). Bald Eagle: (23 Apr. (1) MPP (EH, LH). Osprey: first 14 Apr. WaR. Turkey: 10 Mar. (1) CC (KOS). American Woodcock: 5 Mar. (2), 10-12 Mar. WaR. Common Snipe: 25-30 Mar. (1-8) MC (CRS). Spotted Sandpiper: 14 Apr. (1) E (LRH), 26 Apr. (1) SVC (FA, JMC, RME). Solitary Sandpiper: 28 Apr. (1) MC (CRS).

Owls-Kinglets: Barred Owl: 7 Apr. (1) LPN (FWB). Chuck-will's-widow: first 22 Apr. (1) MC (CRS). Whip-poor-will: first 27 Apr. (1). Common Nighthawk: first 20 Apr. (1) E (FWB). Yellow-bellied Sapsucker: last 14 Apr. (1). Eastern Kingbird: first 13 Apr. (1). Greast Crested Flycatcher: first 20 Apr. (1). Tree Swallow: 6 Apr. (8) WaR (GW). Rough-winged Swallow: first 20 Mar. (1). Barn Swallow: first 2 Apr. (1). Common Raven: 4 Feb. (3) SL (PP), 10 Mar. (1) RM, 29 Mar. (2) RM, 13 Apr. (2) UM, 21 Apr. (1) RM. Black-capped Chickadee: 4 Feb. (8) SL (PP). Red-breasted Nuthatch: 4 Feb. (1) SL (PP). Brown Creeper: last 9 Mar. (1). Bewick's Wren: 7 Apr. (1) E (FWB). Hermit Thrush: 18 Feb. (1) CC (PP). Blue-gray Gnatcatcher: first 10 Apr. (1). Ruby-crowned Kinglet: last 29 Apr. (1).

Vireos-Sparrows: White-eyed Vireo: first 15 Apr. (1). Solitary Vireo: first 31 Mar. (3) Red-eyed Vireo: first 26 Apr. (1). Warbling Vireo: first 28 Apr. (2). Black-and-white Warbler: first 11 Apr. (1). Worm-eating Warbler: first 6 Apr. (1) Parula Warbler: first 14 Apr. (1). Black-throated Blue Warbler: first 20 Apr. (2). Black-throated Green Warbler: first 20 Apr. (4). Yellow-throated Warbler: first 6 Apr. (1). Chestnut-sided Warbler: first 21 Apr. (1). Pine Warbler: 10 Mar. (3) CC (KOS), 21 Apr. (1) E (LRH). Prairie Warbler: first 18 Apr. (1). Ovenbird: first 20 Apr. (6). Louisiana Waterthrush: first 30 Mar. (3). Yellowthroat: first 20 Apr. (1). Yellow-breasted Chat: first 21 Apr. (1). Hooded Warbler: first 20 Apr. (1). Canada Warbler: first 28 Apr. (1). Baltimore Oriole: first 20 Apr. (1) E, 26 Apr. (1) GAT (FA, JMC, RME, ETS). Rusty Blackbird: 10 Mar. (1) SVC (PP), 9 Mar. (3), 20 Mar. (8), 25 Mar. (2). Scarlet Tanager: first 20 Apr. (2). Summer Tanager: first 21 Apr. (1). Indigo Bunting: first 25 Apr. (1). Purple Finch: 7 Apr. (5), 10 Apr. (3), 19 Apr. (2). Pine Siskin: 4 Feb. (1) SL (PP). Red Crossbill: 4 Feb. (8) SL (PP). Savannah Sparrow: 19 Mar. (3), 3 Apr. (2). Chipping Sparrow: first 3 Mar. (1). White-crowned Sparrow: last 24 Apr. (1). Fox Sparrow: only 9 Mar. (1). Swamp Sparrow: 24 Mar.-21 Apr. (1-2) MC (CRS).

Locations: CC—Cades Cove, CL—Chilhowee Lake, E—Elizabethton area, GAT—Gatlinburg, LPN—Lake Phillip Nelson, LL—Laurel Lake, MC—Milligan College, MPP—Meigs Post Prong, Great Smoky Mountains National Park, RM—Roan Mountain, SL—state line, between Newfound Gap and Clingman's Dome, SVC—Sugarlands Visitor Center, UM—Unaka Mountain, WaL—Watauga Lake, WaR—Watauga River, WiL—Wilbur Lake.

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A COMPARISON OF THREE HERONRIES IN THE MISSISSIPPI VALLEY

By Earl L. Hanebrink

Published accounts of heronries in the Mississippi Valley include three locations within a relatively short distance from each other, south of Cairo, Ill. Elder (1951) and Peterson (1965) described one near Sikeston, Missouri. Ganier (1960) reported on another at Dyersburg, Tennessee and a heronry near Luxora, Arkansas was introduced into the literature by Hanebrink and Cochran (1966). It is the purpose of this paper to compare these three heronries as to the numbers of breeding birds, species composition and habitat types.

Possibly the largest nesting colony of the Little Blue Heron (*Florida caerulea*) along the Mississippi River is the heronry located near Luxora, Arkansas. This heronry is located in Mississippi County, Arkansas, three miles northwest of the Missisippi River and seven miles northeast of Luxora on Arkansas Highway #120. During the past four years (1964-67) the writer had the opportunity to study the nesting and species composition at this heronry.

The heronry is located in an eight acre strip of woods which is roughly rectangular in shape with its long axis running east and west. The area is completely surrounded by cultivated fields and has no standing water within the wooded area itself. This makes the heronry somewhat unique since most heronries have some water standing during the nesting season. The location is in the Mississippi delta which is low, flat, fertile land that is drained by several man-made ditches. The surrounding area is almost entirely devoted to row or cereal crops. Therefore, there are few trees except those found along borders and along the Mississippi levee. Major commercial crops are cotton, soybeans, wheat, and rice.

Estimated numbers of breeding birds for the Luxora heronry were determined by marking the eight acre woods into strips so that a total count of nests could be obtained. This method was used by Ganier (1960) in determining numbers of herons and egrets at the Dyersburg heronry. The number obtained was doubled to derive the total number of breeding birds in the heronry.

Species composition in the Luxora heronry includes the Little Blue Heron (*Florida caerulea*), Common Egret (*Casmerodius albus*), Cattle Egret (*Bubulcus ibis*), Glossy Ibis (*Plegadis falcinellus*), and the Black-crowned Night Her-

TABLE 1

Estimated Number of Breeding Birds Using The Heronry at Luxora, Arkansas

1967

Species			*Number*
Little Blue Heron (*Florida caerulea*)			3008
Common Egret (*Casmerodius albus*)			140
Common Grackle (*Quiscalus quiscula*)			74
Cattle Egret (*Bubulcus ibis*)			50
Mourning Dove (*Zenaidura macroura*)			32
Baltimore Oriole (*Icterus galbula*)			6
Black-crowned Night Heron (*Nycticorax nycticorax*)			2
Indigo Bunting (*Passerina cyanea*)			2
Cardinal (*Richmondena cardinalis*)			2
Glossy Ibis (*Plegadis falcinellus*)			1
Ave. Per Acre	414.7	Total	3317

on (*Nycticorax nycticorax*). Estimated numbers of breeding birds using the heronry are summarized in Table 1. According to local farmers the heronry has been active for approximately 15 years. Numbers seem to be on the increase. This is especially true for the Cattle Egret. An overflow from this heronry appeared for the first time during the 1967 breeding season. A dozen pairs of Little Blue Herons nested in a triangular three acre woods approximately three miles northwest of the heronry. Other recent colonies are being established in the Reelfoot Lake area in Tennessee (Ben Coffey, personal communications).

It was in the Luxora heronry that the first nesting record in the state occurred for the Glossy Ibis (*Plegadis falcinellus*) (Hanebrink and Cochran, 1966). During the breeding season of 1965 three pairs were observed nesting. One specimen, a female was taken and is now placed in the Arkansas State University Museum (ASUM # 40, female). Two pairs nested successfully during the 1965 breeding season. Mr. Ben Coffey checked on the progress of the Glossy Ibis during the latter part of the breeding season and also reported the first nesting of the Cattle Egret. At this time only a few pairs nested. The 1966 breeding season had two pairs of Glossy Ibises nesting. During the 1967 breeding season the Glossy Ibis did not nest but on two different days a single Glossy Ibis was seen in the heronry.

At the Luxora heronry nest building of the Little Blue Heron begins during the first week in April and by 17 April, the majority of the Little Blue's nests contained eggs. By 20 May, young appeared in the nest; but approximately half of the nests have eggs at various stages of incubation. Most of the eggs have hatched by early June. No eggs were observed in nests after mid-July. The Little Blue Heron starts the nesting season earlier than the other herons and egrets. The Cattle Egret and Common Egret are approximately three weeks later in their nesting. There is little mixing of the sepcies. Usually the Common Egret nests were higher in the larger trees. Cattle Egrets nest together and are clustered in only a few trees. The Glossy Ibis were among entangled grape vines at the extreme west end and at the tops of the smaller trees. Little Blue Herons nested in the same trees as the Glossy Ibis. The Little Blue Heron nests range from five feet above the ground to those which are found in the tops of the trees. The smaller trees were preferred as nesting sites by the Little Blue Herons. These trees were found in the western portion of the heronry. Many of the Little Blue Heron nests were found among the thorns of the Honey Locust (*Gleditsia triacanthos*).

Many young are raised at this heronry each year. The mortality rate is not high. Heavy rains and winds during early May and June often cause some egg losses and mortality of the newly hatched herons. There is very little evidence of predator destruction in the heronry. Occasionally a few herons and egrets are destroyed by shooting, although this is not a serious problem. During the latter part of July, the mortality rate is increased among the half grown. Apparently these birds leave or fall from the nest and starve. Several are found on the ground at this time which appear weak and unable to fly. There are local reports of some young flying to nearby farm yards and fields, later unable to fly back because of a weak condition. These die of starvation. Perhaps some of the adults quit feeding their young before they are able to care for themselves. Apparently those that fall from the nests are not fed by the adults and perhaps are not missed.

Adult birds feed on what is available throughout the nesting season. During the early part of the breeding season a higher percentage of Crayfish (*Cambarus* spp.) and tadpoles appeared in the regurgitated pellets. At that time there was water in the nearby drainage ditches located at the edges of the nearby fields. Crayfish and tadpoles were found to be abundant in these drainage ditches. Later as these ditches dry up a higher percentage of small fish appear in the regurgitated pellets. By this time the adult birds feed extensively at the Mississippi "barrow pits" and "sloughs." During August, shad, minnows, and small sunfish make up the bulk of the food. Insects are obtained also from the nearby rice fields. Stomach contents of a female Glossy Ibis collected on 1 June 1965, revealed that it had been feeding on tiny clams (Hanebrink and Cochran, 1966).

Cattle Egrets and Common Egrets travel some distance from the heronry in search for food. These birds along with the Little Blue Heron were observed along levees in rice fields throughout the county. The Common Egrets are usually found single in their feeding territories at the Mississippi "sloughs" and "barrow pits." The Little Blue Heron is often found congregated in larger numbers in these areas.

In comparing these three heronries the numbers of breeding pairs are about the same and the nesting areas are somewhat of the same size and near the Mississippi River. The "sloughs" and "barrow pits" along the Mississippi River

TABLE 2

A COMPARISON OF THREE HERONIES IN THE MISSISSIPPI VALLEY

	Luxora Heronry	Sikeston Heronry	Dyersburg Heronry
Estimated number of breeding birds	3,119	2,000- 2,400	1,600
Most abundant nesting species	1. Little Blue Heron 2. Common Egret 3. Cattle Egret	1. Little Blue Heron 2. Common Egret 3. Black-crowned Night Heron	1. Little Blue Heron 2. Common Egret 3. Black-crowned Night Heron
Canopy	Mixed lowland deciduous woods	Pine Grove (*Pinus echinata*)	Mixed lowland deciduous woods
Distance from Mississippi River	3 miles	8 miles	25 miles
Ground Habitat	Dry deciduous woods	Dry pine grove	Water standing in spring
Number of years in existence	15	10	13
Approximate arrival date for breeding birds	1 April	1 April	1 April

serve as major feeding grounds. The arrival date is the same for each of the heronries. Comparisons are shown in Table 2.

LITERATURE CITED

Elder, William H. 1961. Notes on a heronry in southeastern Missouri. Bluebird, 28:13.

Ganier, Albert F. 1960. A new heronry in northwest Tennessee. The Migrant, 31:48-49.

Hanebrink, Earl L. and Richard Cochran. 1966. An inland nesting record for the glossy ibis (*Plegadis falcinellus*) in Arkansas. Auk, 83:474.

Peterson, Clell T. 1965. An unusual colony of Little Blue Herons. Wilson Bull., 77:192.

Arkansas State University, State College, Arkansas 72467.

A NESTING STUDY OF THE KING RAIL AND LEAST BITTERN

By Jon E. DeVore

THE AREA

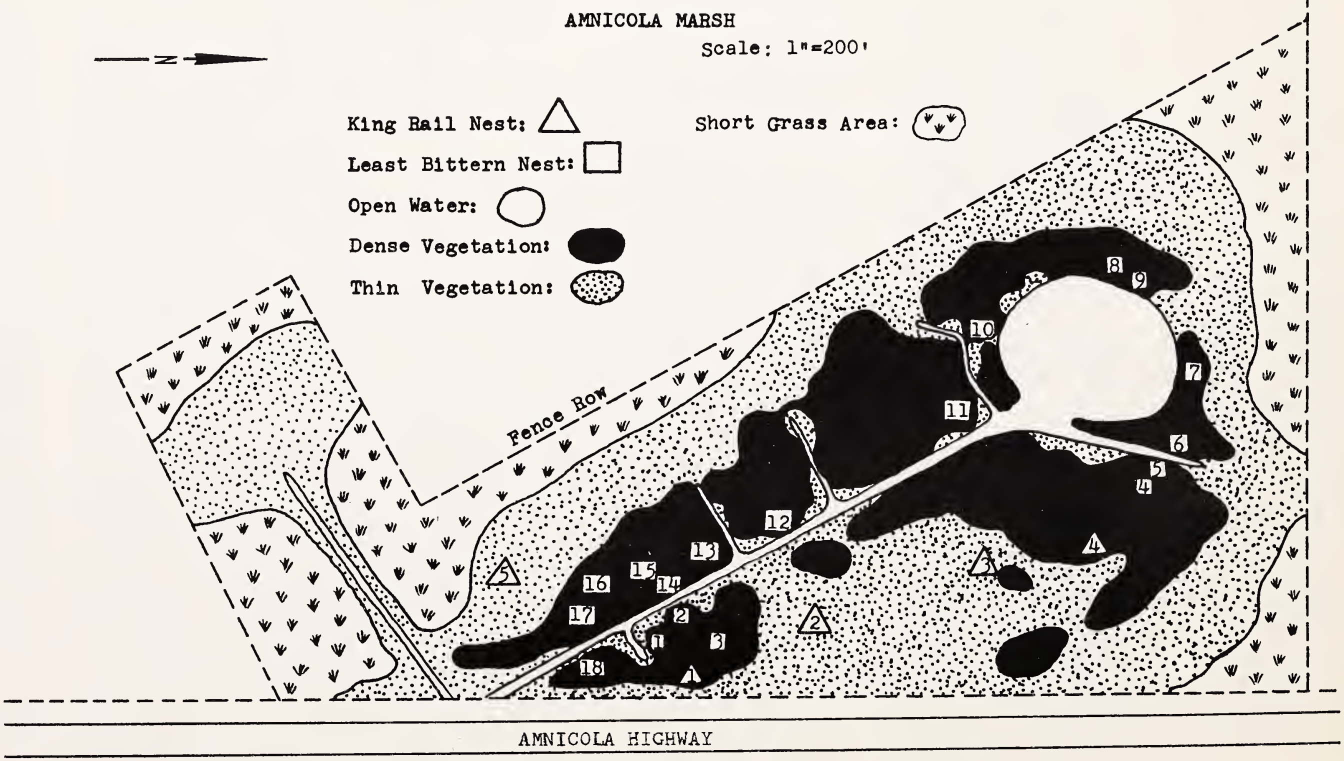
The area in which this study was conducted is known as the Amnicola Marsh. This area is a natural fresh water impoundment lying 3.2 air miles due southeast of Chickamauga Dam and adjacent to the Amnicola Highway. It is approximately 30.0 acres in size, which includes all the area within the present fence boundary (See Figure 1). The water level is maintained by one, possibly more, springs which are located in the center of the open water at the northwest end of the marsh. The marsh also acts as the headwaters of Citico Creek, which has its origin here and empties into the Tennessee River after traveling 3.4 miles.

The marsh had its beginnings some 15 to 20 years ago as a small spring pool with a drainage creek flowing away from it. As years passed the surrounding low areas were slowly inundated. The ground was loosened, raised, and vegetation changes began to take place. The typical meadow grasses and weeds were slowly replaced by rushes and cattails. Every time there was a heavy rain a little more of the surrounding land was incorporated into the marsh. The continual standing of water and the occasional "floods" have produced the marsh as it now exists. The average water depth, exclusive of the open water, is 18 inches. The average depth of the open water is approximately 36 inches.

For convenience of this study, I have chosen to divide the shallow water area into two large, general vegetation types, *dense* vegetation areas and *thin* vegetation areas. The dominant plant of the dense vegetation areas is the Great Bulrush (*Scirpus validus*). This plant makes up 90% or more of this area and, as will be noted later, is the plant in which most of the nests were located. The dominant plant, 75% approximately, of the thin vegetation areas is the Pondweed (*Potamogeton epihydrus*). Other species of plants which make up appreciable parts of the vegetation are: Cattail (*Typha latifolia*), Water Plantain (*Alisma subcordatum*), Beak-rush (*Rhynchospora corniculata*), Buttonbush (*Cephalanthus occidentalis*), Rose Mallow (*Hibiscus Moscheutos*), several species of sedge (*Carex* sp.), Duckweed (*Spirodela polyrhiza*), and the two Spike Rushes (*Eleocharis compressa* and *E. quadrangulata*). During the period from early May to late September, the pond at the northwest corner of the marsh is covered with a profuse growth of the Lotus Lily (*Nelumbo lutea*). Also located within the center of the pond are three very poor specimens of the Willow Tree (*Salix babylonica*). These trees are no more than ten feet high and contain many dead and decaying branches. All three are located on what remains of a small mound. At present these are the only trees within the water area of the marsh.

Like the plant life, the animal life, too, is varied. In the three years which this writer has kept records on the marsh, 99 species of birds have been recorded as occuring there at various times of the year. Noteworthy among

Figure 1. Drawing of Amnicola Marsh as adapted from personal measurements and maps by the United States Geologic Survey.


AMNICOLA MARSH
Scale: 1"=200'
N
King Rail Nest:
Least Bittern Nest:
Open Water:
Dense Vegetation:
Thin Vegetation:
Short Grass Area:
Fence Row
AMNICOLA HIGHWAY
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these have been the first Chattanooga area records for the following species: Cattle Egret (*Bubulcus ibis*), Louisiana Heron (*Hydranassa tricolor*), Glossy Ibis (*Plegadis falcinellus*), Virginia Rail (*Rallus limicola*), Purple Gallinule (*Porphyrula martinica*) and the Willet (*Catoptrophorus semipalmatus*). Insect life is, of course, abundant. One very noticeable thing concerning the insect life however is the almost total absence of mosquitos. This is due, I believe, to the great numbers of the Mosquitofish (*Gambusia affinis*) which are found everywhere in the marsh. Other fish which have been taken from the area are the Bluegill (*Lepomis machrochirus*) and the Largemouth Bass (*Huro salmoides*). Around the perimeter of the water area may be seen at various times the following rodents: the House Mouse (*Mus musculus*), Norway or House Rat (*Rattus norvegicus*), and the Cottontail Rabbit (*Sylvilagus* sp.). Within the water area can be found still another rodent, the Muskrat (*Ondatra* sp.). Three large "lodges" are located around the pond and the animals can be observed at times apparently sunning themselves in the late afternoon. There is good evidence now to indicate that the marsh has become the home of one or more Mink (*Mustella vison*). This will be discussed later under the Least Bittern data. In my trips to the marsh, only one species of snake has been encountered, it appearing to be a Water Snake (*Natrix* sp.). Amphibians present are: Bull Frog (*Rana catesbeiana*), Grass Frog (*Rana pipiens*), Fowler's Toad (*Bufo fowleri*) American Toad (*Bufo americanus*), Spadefoot Toad (*Scaphiopus holbrookii*), and unidentified species of the small Tree Frogs (*Hyla* sp.). Along the fences which form the boundary of the marsh can be found the Eastern Five-lined Skink (*Eumeces fasciatus*), and the Eastern Fence Lizard (*Sceloporus undulatus*). Four species of turtles have been seen within the marsh: Common Snapping Turtle (*Chelydra serpentina*), Slider (*Pseudemys* sp.), Painted Turtle (*Chrysemys picta*), and the Spiny Soft-shelled Turtle (*Trionyx ferox*).

KING RAIL DATA

Physical aspects of the nests: During the period covered by this study, 22 May to 30 July, 1967, five active nests of the King Rail (*Rallus elegans*) were located within the boundaries of the marsh. At each of the nests certain physical characteristics were checked, these being: the diameter of the nest, the materials used in its construction, its height above the water level, and the type of plant in which the nest was located. The diameter of each nest, in inches, was taken at its widest points at the top of the rim of the nest. The five nests had an average diameter of 8.0 inches, with the smallest diameter noted being 7.5 inches and the largest 8.5 inches. Each of the nests was examined as closely as possible so as to ascertain what materials were used in its construction. The following percentages were noted after combining the notes on each nest: 85% of all nest material was Great Bulrush, 5% was Sedge, 5% was Water Plantain, and 5% was Pondweed. In all the nests the Great Bulrush formed the bulk of the nest, with the Sedge, Water Plantain, and Pondweed being incorporated into the top outer edges of the nests. Each nest's height above the water level was measured to its highest point along the top rim of the nest. The five nests averaged 3.6 inches above the water level, with the lowest height noted being 2.5 inches and the highest 5 inches. The nest 2.5 inches above the water and another, 3 inches, were both low enough to get "drowned out" by heavy rains on 7, 8, 9 July, which raised the water level two inches. Certainly, even building the nest one-half inch too low can prove disastrous to this species, especially if nesting in an area of frequent rains where the drainage is poor. All five of the nests were located in large specimens of the Great Bulrush. This is the only plant within the marsh which would provide sturdy enough a base for the rather large nest. After the nest is complete the tops of the bulrush plant are bent over by the bird to form a camouflage canopy from 8 to 10 inches above the nest, with only enough room left for the adult bird to move in or out.

Nesting activity and results: A total of 44 eggs were laid at the five nests, giving an average of 8.8 eggs per nest. Of this number only 8 hatched, giving a 18.1% hatch success. The following list of the five nests gives, in parenthesis, first, the date the nest was first located, second, the number of eggs laid at that nest, and third, the number of eggs hatched. The nest numbers refer to the nests as located on Figure 1. Nest 1 (5 June: 10-8), Nest 2 (4 July: 7-0), Nest 3 (4 July: 7-0), Nest 4 (4 July: 8-0), and Nest 5 (5 June: 12-0). The eggs at Nests 2 and 5 were apparently abandoned, for the adult birds did not return to the nests after the second checks and the eggs remained intact through the end of the study. The eggs at nests number 3 and 4 were ruined when high water invaded the nests as a result of the heavy rains on 7, 8, 9 July. Nests 1 and 5 were probably first nests of the season, as the nesting period for this species usually begins about mid-May in this area. The other three nests, all found in early July, are probably second attempts. On the following dates adult birds and young were observed around the marsh: 2 July (4 adults-3 young), 3 July (5 adults-3 young), 8 July (3 adults-3 young), 9 July (4 adults-5 young), 13 July (3 adults-4 young), 15 July (3 adults-4 young), 16 July (3 adults-1 young), and 22 July (1 adult-3 young). Generally the young birds stayed close to only one of the adults and may well have been the young brought off at Nest 1. Of interest was the different behavior patterns displayed by the adult birds when disturbed at their nests. The adult bird at Nest 1 was most vociferous and fearless in its nest defense. On the first two checks at this nest, 5 June and 12 June, when first flushed from the nest the bird would retreat a safe distance, usually about fifteen feet, and then begin its calling. The calling would persist for several seconds then the bird would appear at some conspicuous place dragging its wings and generally putting on a spectacular display for such a secretive species. As incubation advanced, about 13 to 19 June, the bird became even bolder. Instead of circling away, the bird would come within three to five feet, almost allowing itself to be picked up. At this time the bird showed little fear, her only interest apparently being in returning to the eggs. In direct contrast, the adults at the other four nests never did more than give several calls from the surrounding vegetation when the nests were approached. They never once made themselves visible, preferring to remain within the cover of the dense vegetation. As mentioned previously, it appears Nests 2 and 5 were abandoned. This was due, I believe, to my presence at the nests. Both clutches were complete and incubation had begun, but after my second checks at the nests the adult birds were not seen again at them. It would be well for persons checking nests of this species to limit the number of visits during the laying period and early incubation.

LEAST BITTERN DATA

Physical aspects of the nests: A total of eighteen active nests of the Least Bittern (*Ixobrychus exilis*) were located within the marsh during this study. The same physical characteristics noted at the King Rail nests were also checked at the Least Bittern nests. The eighteen nests had an average diameter of 5.3 inches, with the smallest diameter noted being 4.0 inches and the largest, Nest 6, a rather extreme 8.5 inches in diameter. Of the plant material used in construction of the nests, 98% was Great Bulrush, 1% was Spikerush, and 1% was Pondweed. The Spikerush and Pondweed were found in only five of the nests, being incorporated into the top rim of the nest. The nests averaged 18.2 inches above the water level, with the lowest nest only 8.0 inches above the water and the highest 27.0 inches. As can be seen, the height at which the Least Bittern will build its nest is variable within two to three feet. Probably the birds will utilize the lowest to the highest points possible in the marsh plants in which they nest. The type of plant chosen must be sturdy enough to support the rather frail nest, which more appropriately could be called a platform. In our area the Bulrush is such a plant and, with one exception, was the plant in which all the nests were located. Nest number 18 was in a Great Bulrush plant which was partially ingrown with a Cattail, the nest being attached to both.

Nesting activity and results: A total of 63 eggs were laid at the eighteen nests, giving an average of 3.5 eggs per nest. Of the 63 eggs laid, only 23 hatched, giving a 36.3% hatch success. The following list of the nests gives, in parenthesis, the date at which the nest was first located, the number of eggs laid, and the number of eggs hatched. The nest numbers refer to the nest location as given on Figure 1. Nest 1 (12 June: 3-0), Nest 2 (22 May: 5-4), Nest 3 (12 June: 4-0), Nest 4 (5 June: 5-0), Nest 5 (3 July: 2-0), Nest 6 (3 July: 1-1), Nest 7 (14 July: 4-0), Nest 8 (5 June: 5-5), Nest 9 (3 July: 2-0), Nest 10 (3 July 4-4), Nest 11 (5 June: 5-4), Nest 12 (12 June: 1-0), Nest 13 (5 June: 5-0), Nest 14 (13 June: 4-1), Nest 15 (30 May: 5-0), Nest 16 (5 June: 4-4), Nest 17 (12 June: 2-0), and Nest 18 (22 July: 2-0). Nests 9, 12, and 17 were apparently abandoned, for adult birds were not seen at the nests after the first check and the eggs remained in the nests for the duration of the study. At the other nests where eggs were not hatched there was definite depredation which destroyed the nestings. Nests 1, 4, 7, 13, and 15 all disappeared without a trace. Careful searches at these nest sites failed to reveal any evidence of the nest, eggs, young birds, or adults. At Nests 3, 5, and 18 the eggs were destroyed, with the eggs being broken and the contents gone. Also, at Nest 18 the adult bird was killed and partially eaten. On two occasions, 13 June and 3 July, one adult and two young birds were found dead and partially eaten. The Mink is the only animal which could be expected to occur in the marsh which would have the ability not only to take eggs and young birds, but also uninjured adults. It may well be that the Mink, or Minks, were drawn to the marsh in search of the Muskrats which now live there and took the Least Bitterns only as an easier source or additional source of food. The nests located in late May and early June are probably first nestings of the season, while those found in late June and July being second attempts. This species is most secretive around its nest and when approached at the nest will sneak off through the vegetation and takes wing only when some distance away. No distraction display of any type was noted, even at nests which contained newly hatched young. The young birds, even during their first day, show a marked indifference to any intrusion around the nest. The ability to assume the "broken reed" stance is apparently also present at an early age. Even before they are able to leave the nest the young, when approached in the nest, will move to the edge next to the supporting plant and assume the motionless stance with bill pointed skyward. After the young leave the nest they become almost impossible to find in the vegetation.

SUMMARY

From 22 May to 30 July 1967, nesting studies on the King Rail and Least Bittern were carried out at the Amnicola Marsh near Chattanooga, Tennessee. A total of five King Rail and eighteen Least Bittern nests were located. Physical aspects noted of each nest were: the diameter of the nest, the material used in its construction, its height above the water level, and the type of plant in which the nest was located.

A total of forty-five King Rail eggs were laid at the five nests during the study, with eight being hatched. This represents an 18.1% hatch success. Too close checking procedures at the nests is suggested as a possible reason for abandonment of them, especially if the birds are in the early stages of incubation. Display behavior of adult birds around the nests is also discussed.

A total of sixty-three Least Bittern eggs were laid at the eighteen nests, with twenty-three being hatched. This represents a 36.3% hatch success. Depredation occured at several of the nests during the study, with eggs, young, and adult birds being taken. It is hypothesized that one, or more, mink is the predator responsible. Display behavior and the "broken reed" stance of the young are discussed.

ACKNOWLEDGMENTS

Grateful thanks are extended to Dr. Robert G. Litchford of the Biology Department of the University of Chattanooga for his review of the work and to Mr. Kenneth Dubke for his ever-present encouragement and many suggestions.

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NOTICE OF DUES CHANGE

Effective 1 January 1969, changes in classes of dues as listed will be as follows: annual dues, $3.00; libraries and subscribers, $3.00; family membership, $4.00.

ROUND TABLE NOTES

HERONRY AT DYERSBURG STILL ACTIVE—The heronry just northeast of Dyersburg, Tennessee on Highway 51 is still active. This heronry was mentioned in an article by Albert Ganier (The Migrant 31:48-49) and by Mrs. Ben Coffey (The Migrant 35:54).

According to Mrs. John Lamb this heronry dates back to the early 1940's. At that time the area was swampy and somewhat remote. Over the years it has grown in size. It reached its population peak in the summer of 1965. Mrs. Coffey states that during her visits in 1964 there were an estimated 2,500 nests in the area. About three fourths of these were of the Little Blue Heron (*Florida caerulea*). Except for the nests of eight Cattle Egrets (*Bubulcus ibis*) the rest of the nests were of Common Egrets (*Casmerodius albus*). In the spring of 1966, the trees in the heronry were cut. The surrounding area had been developed as a subdivision and the residents did not like the birds nesting so close. When the birds returned they made a new, but smaller, heronry about 200 yards east of the old site and within 100 yards of the new Sylvania plant.

There are about 500 nests in the heronry this year. About ninety percent are of the Little Blue Herron. The remainder of the nests are of the Common Egret and the Cattle Egret. I have seen a few Black-crowned Night Herons (*Nycticorax nycticorax*) in the heronry, but I do not believe that they are nesting there. Yellow-crowned Night Herons (*Nyctanassa violacea*) are fairly common in the Dyersburg area, but I have never seen any at the heronry. Because of its easy accessibility, anyone who is in the Dyersburg area should be sure to see this heronry.

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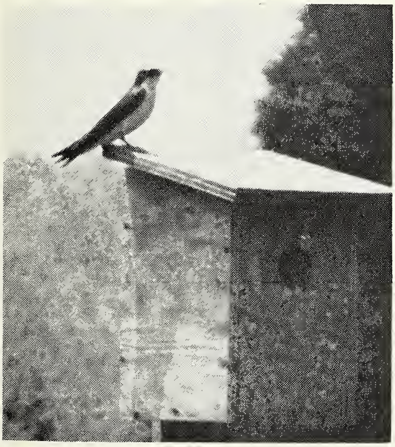
TREE SWALLOWS NESTING IN EAST TENNESSEE—In 1967 on Breeding Bird Survey, Route T-31 Elk Valley, Mr. James H. Burbank reported nesting Tree Swallows (*Iridoprocne bicolor*) at Stops 49 and 50. I questioned him on the identification and though I had never seen Tree Swallows, his description satisfied me. In August 1967, I saw Tree Swallows resting on a snag of a dead limb protruding above the water in Cove Lake.



MALE TREE SWALLOW AT NEST

On 14 May 1968, Tree Swallows were found occupying two bluebird boxes erected by Ben D. Jaco in the area below Norris Dam, Anderson County, Tennessee, three miles from the town of Norris.

Mr. Jaco checked all the bluebird boxes on 24 April 1968, and found no nests, but on 29 April found Tree Swallows in possession of two boxes. On 30 April, eggs were found in Box #1—he made no count of the eggs but on 14 May, I counted 6 nestlings in Box #1. These 6 nestlings left Box #1 on 1 June 1968.

On 31 May 1968, parent birds appeared to be feeding nestlings in Box #2. On 3 June 1968, I counted 4 nestlings in Box #2. I was out of town 5 June through 13 June. During my absence these 4 nestlings left Box #2, apparently, successfully as no evidence of any vandalism or tragedy could be found.

Boxes used are not more than four feet from the ground and in open sunny situations, about one-quarter mile from Clinch river. Both boxes are situated so that TVA maintenance crews mowed grass directly beneath and surrounding the boxes the entire time the birds occupied the nests. Box #1 was on a fence adjacent to a heavily traveled U.S. Highway and beside a stop sign—facing the traffic of the roadway. Box #2 is situated adjacent to an extensive planting of mulberry trees. Large open fields between nesting boxes and the river afford feeding on insects.

This writer contacted Dr. James T. Tanner, James Campbell, J. B. Owen, Beth Wuest, and Julia Moore. I understand James Campbell visited the boxes several times and brought other members of Knoxville Chapter, TOS with him.

While incubation was in progress, each time I visited the boxes one Tree Swallow was perched on top of the box and an adult head protruded from the box opening. I assumed the perched bird to be the adult male and the protruding head to be the female bird.

On 25 June, upon opening Box #1, I saw 4 bluebird eggs. On 27 June, in company with Miss Julia Moore, Mrs. Douglas Tunsberg, and Mrs. Irene Wilcox, I again opened Box #1 and discovered five Tree Swallow eggs. I've no explanation for either the appearance or disappearance of the 4 bluebird eggs. 25 June was overcast so the eggs could not pick up color from a blue sky; also, bluebird eggs are somewhat larger than Tree Swallow eggs. The box had not been cleaned out following its use by Tree Swallows for a first nesting.

On 20 July, five nestlings of the second nesting in Box #1 left the nest. At 4 p.m., three nestlings were still in the box; parent birds and two young were coursing over low trees on a slight hillside opposite the nesting box. The third nestling left the box at 5:23 p.m.—flew downward and almost touched ground but gained a height of four feet to cross the paved road, gradually climbed in the air until it joined the others of its family. At 6:04 p.m. a fourth young left the nesting box repeating the performance of the third nestling. Occasionally one parent bird flew at me and made a most aggressive clicking noise as I stood beside my car parked some ten feet from the nesting box. The fifth nestling did not leave the nest while I remained in the vicinity. At 7 p.m. I moved my car on down the road a quarter mile distant, when I got out of the car and upon using my 8x40 binoculars I counted five immatures with parent birds flying low over the hillside.

On 21 July, no Tree Swallows were visible anywhere in the area below Norris Dam.

Three nestings in two bluebird boxes below Norris Dam this season successfully fledged 15 young.

The only other Tennessee record of nesting Tree Swallows was reported in The Migrant, 35:51 by Mr. Albert F. Ganier.

FRANCES B. OLSON, Norris 37828.

TREE SWALLOW NESTING IN MAURY COUNTY—On 3 June 1968, 1:30 p.m. at one ofthe Monsanto Chemical Company settling ponds four miles west of Columbia, Tenn., I observed an adult Tree Swallow (*Iridoprocne bicolor*) feeding an immature which was perched over the water on a dead snag approximately forty yards away. The adult was bright green above and the immature was a dull brown; both birds were white underneath with the throats being very clear which matches Peterson's description in *A Field Guide To the Birds:* "Steely blue-black or green-black above and *clear white* below;". The birds were observed for only three minutes during which time the young was fed twice. Neither bird showed any reaction to my presence, although I was in full view of both.

On 4 June, the Tree Swallows were observed for thirty-five minutes beginning at 10:45 a.m. The nest was located approximately twelve feet high in a hole in a dead tree standing in the water approximately twenty-five yards from the bank. The immature was not seen. Two adults were present, one with a green head sitting in the nesting hole and one flying, whose back was a metallic blue-black. The second bird made fourteen passes at me, coming as close as three feet away. At the time I was approximately one hundred yards away with a Bausch & Lomb (15X to 60X) Zoom Scope trained on the nest. The bird flying was observed with Leitz 10x40 binoculars.

On 5 June, at 1:00 p.m., the birds were observed by Dan R. Gray, Jr. who verified my identification. Two adults and an immature were observed flying and feeding over the water. The young entered the nest four times during the half hour of observation.

The site was checked for the last time on 18 June, when again two adults and an immature were reported. Three was the maximum number of birds seen on any trip, with no more than one immature ever observed. This appears to be the first mid-state summer record (i.e. after 24 May) for this species (*Birds of the Nashville Area,* Henry E. Parmer, p. 20). The only other nesting record for the state that I know of is 1918 at Reelfoot Lake (The Migrant, 35:51) by Ganier (personal communication with H. E. Parmer).

DAN R. GRAY, III, Wildwood Nature Camp, Barre, Mass.

HENSLOW'S SPARROW IN HARDIN COUNTY—On 6 April 1968, at about 4:00 p.m., Mr. and Mrs. Shardian Johnson of Chetek, Wisconsin, Mike Barber, Jerry Mathis, John Williams and I saw a Henslow's Sparrow (*Passerherbulus henslowii*) near Olive Hill, by the old Highway 64 bridge over Indian Creek. It flew up from underfoot as we were walking in a pasture, flew close to the ground for about ten yards, and hid in the short grass when it landed. We approached slowly until we were all about two yards from the bird, and it remained at that spot for about five minutes. The greenish or olive color of the crown and nape were very evident when viewed from above. It flew about three more times to other spots in the grass and then to a fence at the edge of a wooded area (mixed deciduous trees and shrubs, at this point mostly Hackberry, *Celtis occidentalis*). Here it still allowed us to approach closely. Each time it flew it went carefully along the edge of the brush, neither flying out over the grass nor retreating into the woods, and not once going much higher than our heads. Viewed from the front and below it showed a "necklace" of distinct streaks.

About 7:00 p.m. the next day I returned with Mike, Barry, and Alan Patterson. The bird was at the same place. We caught it by erecting mist nets around three sides of a brushy ditch and chasing it up the ditch into the nets.

It compared favorably with the descriptions and illustrations in Peterson *A Field Guide to the Birds,* Robbins *Birds of North America,* and Roberts *Birds of Minnesota,* with two exceptions: the "*necklace*" mentioned above does not show in Peterson's illustration, and the wings were pale or faded rufous instead of the "*bright rufous or chestnut*" of Roberts. The wing chord measurement was 55 mm.

While we were handling the bird it twice made a sound very similar to the song of Henslow's Sparrow as recorded on Peterson *A Field Guide to Bird Songs* (Houghton Mifflin Company, Boston), which we played about one minute afterward. We heard no other sound from it at any time either day.

After photographing the bird we released it. It climbed steeply and rapidly until out of sight.

The weather both days was clear and warm, with little wind. All observers had 7x35 binoculars, almost superfluous at such close distances. All observers have some experience with sparrows, but none had ever previously examined a Henslow's Sparrow.

DAVID E. PATTERSON, Harbert Hills Academy, Olive Hill 38475.

DECEMBER NESTING OF THE CAROLINA WREN—On 3 January 1968, the writer, accompanied by Mr. Kenneth Dubke, examined a recently abandoned nest of the Carolina Wren (*Thryothorus ludovicianus*) in the open garage of Mr. H. C. Collie, 619 Colville Street, Chattanooga, Tennessee.

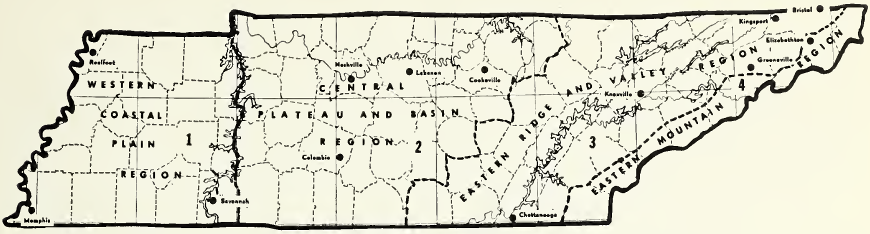
The writer was informed of the nest by Mr. Collie (telephone conversation), who stated that both the adult birds had been present until about one week previous. The nest, which was the typical ball-shape with small side entrance hole, was located some six feet off the ground in a large tin can fastened to the garage wall. Upon closer examination of the nest, two dead young birds and one egg were found. The young birds appeared to have been dead no more than one week, as their state of preservation was excellent in what was rather warm weather for this time of the year. Estimated age at the time of death of the two birds was three to four days. As no adult birds were seen by the writer or Mr. Dubke, it was decided to forward the one egg to the Curator, Mr. Albert Ganier, for positive identification. In a letter of 7 January 1968, Mr. Ganier says, "I have compared it (the egg) with several sets each of Carolina, Bewick's, and House Wrens. There is not the least doubt about the egg being that of a Carolina." Considering the nest had been abandoned seven to ten days and the fact that the normal incubation period is approximately thirteen days, it is estimated this egg was laid on or about 13 December 1967.

This very early nesting was most probably prompted by the unusually warm weather which prevailed in this area and across the state in the month of December. On several occasions the temperature here reached into the lower eighties, causing some shrubs to bloom prematurely.

JON E. DEVORE, 4922 Sarasota Drive, Hixson, 37343.

THE SEASON

Charles R. Smith, *Editor*



The months of May, June, and July were not especially outstanding with respect to the weather. Temperatures for May ranged from two to three degrees lower than average for the state; precipitation was one to two inches above average for the West and Middle portions of the state, with the Eastern portion of the state receiving a normal amount. June was very similar to May, temperature-wise, with temperatures ranging from one to two degrees cooler than average across the state. Precipitation for June was normal in the Eastern part of the state; however, both Middle and West Tennessee averaged about one inch below the normal levels for June in those regions. Statewide weather data for July was not yet available from the Weather Bureau at the time of this article. Upper East Tennessee experienced normal temperatures for July; however the weather was very dry, with the precipitation level being about 2.5 inches below the normal level for the month.

Some interesting migration records for this period are as follows: Mourning Warbler from the Coastal Plain and also from the Ridge and Valley Region, Connecticut Warbler from the Ridge and Valley Region, late May records of the Yellow-bellied Flycatcher at Savannah and the Yellow-bellied Sapsucker at Johnson City, White-rumped Sandpiper at Chattanooga; the mid-July records of the Spotted Sandpiper from Savannah and Chattanooga probably indicate the beginning of fall migration for this species. Late spring records of the Cattle Egret in Nashville and Knoxville add to a growing list of records of this species in the state.

July records of the American Widgeon and Purple Gallinule from the Ridge and Valley Region are worthy of consideration. Both Black-crowned and Yellow-crowned Night Herons were noted nesting in the Ridge and Valley Region for this summer. The nesting of Tree Swallows at Norris Lake and their possible nesting at Columbia is also notable. There were also several records of nesting Song Sparrows from the eastern part of the Central Plateau and Basin Region. More detailed information concerning the above noted observations may be found under the regional reports which follow this introduction.

WESTERN COASTAL PLAIN REGION—*Herons-Vireos:* Great Blue Heron: 27 May (2) R, 5 July (1) S. Green Heron: present at only one of four usual Savannah locations. Least Bittern: 7 June (1) R. Sharp-shinned Hawk: 21 June (1) S. Cooper's Hawk: 27 July (1) S. Spotted Sandpiper: 30 May (1), 17 July (2) S. Least Tern: 27 May (1), 22 June (5) R. Yellow-bellied Flycatcher: 23 May (1) (banded) S. Bank Swallow: 21 May, at least (2), probably 20 in mixed group of 1,000 Rough-winged, Barn, and Cliff Swallows, S; 27 July (5,000) R (EC). Bewick's Wren: 5 May (26), none in June or July, S. Short-billed Marsh Wren: 5 May (2). Gray-cheeked Thrush: 22 May (1) (banded) S. Yellow-throated Vireo: to 20 July (12).

Warblers: Prothonotary: (2)*. Worm-eating: (5)*. Blue-winged: (6)*. Cerulean: (1)*. Yellow-throated: (1)*. Pine: (6)*. Prairie: (8)*. Ovenbird: (5)*. Louisiana Waterthrush: (7)*. Kentucky Warbler: (7)*. Mourning Warbler: 5 May (1), 21 May (1) (banded) S. Yellowthroat: (52)*. Yellow-breasted Chat: (68)*. Hooded Warbler: (5)*. *20 June to 20 July, S.

Orioles-Sparrows: Baltimore Oriole: 21 June (15) R. Scarlet Tanager: 20 June to 21 July (8) all males, S. Blue Grosbeak: 20 June to 21 July (15) including 3 families with parents feeding young, S. Dickcissel: 22 June (25) R. Grasshopper Sparrow: 20 June to 18 July (2) S. White-crowned Sparrow: 18 May (1) S.

Locations: R-Reelfoot Lake, S-Savannah.

Observers: Eugene Cypert, David and Mike Patterson, John Williams.

DAVID E. PATTERSON, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Grebes-Sandpipers:* Pied-billed Grebe: 29 May (1) MP (DRG). Cattle Egret: 29 May (4) PB (MM), first Nashville record. Mallard: 28 May through 5 June, 3 females with broods of 6, 4, and 7, plus other pairs and singles, CT (DRG). Blue-winged Teal: 28 May Pair CT (DRG). Wood Duck: July approx. (50) young RL (MCW). Sparrow Hawk: very scarce Nashville area as were other hawks. Black-bellied Plover: 4, 5 June (1) CT (DG, DRG). Upland Plover: 4 to 7 May (1) WT (MCW). Spotted Sandpiper: 28 May (1) CT (DRG), 3 June (1) CC (KD). Least Sandpiper: 4 June (3), 18 June (5) CT (DRG). Semi-palmated Sandpiper: 3 June (15), 4 June (2), 18 June (3), CT (DRG), 3 June (17) CC (KD).

Terns-Warblers: Common Tern: 3 June (1) CT (DRG). Black-billed Cuckoo: 3 June (1) TC (KD). Red-cockaded Woodpecker: 10 May pair CWR (KD), female appeared to be brooding. Tree Swallow: 3 to 18 June, pair at nest hole; only one flying young positively identified, CT (DG, DRG). Bank Swallow: 28 May (4) to 4 June (6), then 5 June (1), CT (DRG) by far latest for middle Tenn. Purple Martin: 21 July (1100) CK (RTH). House Wren: July (2) nests near H (KAG). Swainson's Thrush: 18 May (2) H (SB). Gray-checked Thrush: 19 May (1) H (KAG). Veery: 14 May (1) H (KAG). Ruby-crowned Kinglet: 5 May (1) H (KAG). Cedar Waxwing: 21 May (36) (EE), (37) (HCM). Tennessee Warbler: 22 May (1) H (SB). Magnolia Warbler: 18 May (1) H (HCM). Cape May Warbler: 22 May (1) H (SB). Myrtle Warbler: last 5 May (25) RL (MCW). Black-throated Green Warbler: this common migrant not reported during migration. Bay-breasted Warbler: 14 ay (2) H (SB). Blackpoll Warbler: 21 May (8) RL (MCW). Ovenbird: 17 June (1) LC (DRG). Wilson's Warbler: 21 May (1) H (HCM), 21, 22 May (1) CT (GRM).

Grosbeaks-Sparrows: Rose-breasted Grosbeak: 22 May (1) H (SB). Blue Grosbeak: 17 June (7) LC (DRG); resident pair Lillydale, CK (MW); resident pair at RL and H (FM), Nashville. White-crowned Sparrow: 21 May (1) H (HH). Song Sparrow: 3 June (2) TC (KD); 11 June (1) singing GP (KD); 14 June pair feeding young CK (MW); 21 June pair building nest MT (RTH); 13 July pair feeding young AT (RTH).

Locations: AT—Algood, CC—Coffey Co., CK—Cookeville, CT—Columbia, CWR—Catoosa Wildlife Refuge, GP—Goose Pond, Grundy Co., H—at home of observer, LC—Lewis Co., MT—Maryland, Tenn., MP—Mt. Pleasant, PB—Pennington Bend, Nashville, RL—Radnor Lake, TC—Tracy City, WT—Woodbury.

Observers: SB—Sue Bell, KD—Kenneth Dubke, EE—Erline Elmore, KAG—Katherine A. Goodpasture, DG—Dan R. Gray, Jr., DRG—Dan R. Gray, III, RTH—Roy T. Hinds, HH—Helen Hodgson, MM—Margaret Mann, GRM—George R. Mayfield, Jr., HCM—Harry C. Monk, FM—Fanny Murphy, MW—Marie White, MCW—Mary C. Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION—*Loons-Ducks:* Common Loon: 6 May (1) WBL (KD). Pied-billed Grebe: 4-16 June (2 adults, 4-5 young) AM (KD), 29 July (2) CL (FO, BW, CMW). Great Blue Heron: present in small numbers through period and region, max. 30 July (14) HRA (KD). Little Blue Heron: 15 July (2) BL (MER). Cattle Egret: 5 May (11) K (GM, BMc, JMC, JTT, KOS), 13 May (1) HRA (KD, RB), 14 May (3) AM (KD, RB). Common Egret: 13 May (1) HRA (KD), 5, 18, 24 June (1) (KD), regular in July (KD). Black-crowned Night Heron: 6 July (approx. 8 adults, 8 immatures, 5 nests) C (ES). Yellow-crowned Night Heron: no dates reported (three known nests, one known successful, fledging two) AM (KD); 6 June (1) G (RN). Least Bittern: 4 May (1) K (JMC, RME), 10 May (1) K (BL); two unsuccessful nests, no date AM (KD); 16 June (1) AM (KD). American Bittern: 14 May (1) AM (KD, RB), 28 May (1) AM (KD). Canada Goose: through period (4) CL (FO); through period (4) HRA (KD). Mallard: 7 July (2) AM (KD), 13 July (2) AM (JD). Blue-winged Teal: 18 June (1) HRA (KD). American Widgeon: 7 May (1) AM (KD), 24 July (1 female) BL (MER, CRS). Ring-necked Duck: last 13 May (1) NL (KD, RB). Lesser Scaup: last 7 May (14) HRA (KD). Bufflehead: through period (1, injured) HRA (KD). Black Duck: 13 May (2) LHS (KD, RB).

Vultures-Snipes: Turkey Vulture: 13 July (1) Ma (JMC). Black Vulture: 13 May (2) LHS (KD, RB). Sharp-shinned Hawk: 5 May (1) CB (RB). Cooper's Hawk: 13 May (1) TRG (KD, RB). Red-tailed Hawk: no date, successfully nested, two young fledged HRA (KD). Broad-winged Hawk: 11 June (3 young in nest) TRG (KD), 16 June (2 adults around nest with fresh nest materials, no young or eggs seen) K (MG). Bald Eagle: through period (at least one adult and one immature) NOL (JCH). Osprey: 6 May (4 eggs, did not hatch) WBL (KD). King Rail: 4 May (1) G (RN), 4 June (2) AM (KD). Sora Rail: 4 May (1) K (JMC, RME), 4 May (1) G (RN). Purple Gallinule: 7 July (1) M (RS, RM, KG, EJ). American Coot: through 16 June (1) AM (KD), 29 July (1) CL (FO, BW, CMW). Semipalmated Plover: 25

May (1) K (FA, JMC, RME). Common Snipe: last Chattanooga area 7 May (1) AM (KD); last Knoxville area 18 May (1) K (JMC, FA).

Sandpipers-Cuckoos: Spotted Sandpiper: last Knoxville area 26 May (1) NOL (JMC); last Chattanooga area 15 June (1) NL (JD); first fall 15 July (1) AM (KD). Solitary Sandpiper: last spring, 26 May (1) K (FA); first fall 7 July (2) AM (KD). Greater Yellowlegs: last spring, 4 May (1) K (JMC, RME); first fall, 16 July (1) AM (KD). Lesser Yellowlegs: last spring 11 June (1) AM (KD); first fall, 30 July (4) HRA (KD). Pectoral Sandpiper: first fall 22 July (1) AM (KD). White-rumped Sandpiper: 9 June (9) AM, "the white rump was very conspicuous" (KD). Least Sandpiper: last 13 May (7) AM (KD, RB); first fall, 7 July (3) AM (KD). Semipalmated Sandpiper: last 7 May (7) AM (KD). Herring Gull: last 6 May (4) WBL (KD). Ring-billed Gull: last 6 May (2) WBL (KD), 6 May (1) K (FA). Caspian Tern: 30 July (1) HRA (KD). Black Tern: 31 July (1) SB (KD *et al.*). Black-billed Cuckoo: 4 May (1) K (JMC, RME, WS, BS), 13 May (1) TRG (RB), 9 June (2) SC (JMC).

Owl-Warblers: Barn Owl: regular in Johnson City area, also 16 July (nest, 2 young) JC (CRS); regular (2) C (KD, JD), 13 May (1) G (RN). Barred Owl: 13 July (1) CB (Charlie Fisher *fide* KD). Great Horned Owl: 27 July (1) G (RN). Yellow-bellied Sapsucker: 28 May (1) JC (WAB). Tree Swallow: 3 nests fledging 15 young NOL (FO). Bank Swallow: 31 July (1) SB (KD *et al.*). Short-billed Marsh Wren: 29 July (2) G (Roaring Fork) (RN), 30 July (1) G (Grassy Creek) (RN). Swainson's Thrush: 5 May (1) K (JMC, RME), 13 May (2) K (MM). Gray-cheeked Thrush: 4 May (1) JC (WAB), 13 May (1) K (MM). Veery: 2-13 May (1) K (MM), 5 May (1) K (JMC, RME). Ruby-crowned Kinglet: last 5 May (3) K (JMC, RME). Blue-winged Warbler: 18 May (1) CB (KD). Tennessee Warbler: last 5 May (3) K (JMC, RME). Nashville Warbler: last 5 May (1) K (JMC, RME). Magnolia Warbler: last 22 May (1) Ch (KD). Myrtle Warbler: last 13 May (2) K (MM). Black-throated Green Warbler: 21 May (1) K (RME). Blackburnian Warbler: last 5 May (1) K (JMC, RME). Chestnut-sided Warbler: last 10 May (1) K (MM). Bay-breasted Warbler: last 5 May (1) K (JMC, RME). Blackpoll Warbler: last 24 May (1) K (JMC). Palm Warbler: last 13 May (1) TRG (KD, RB). Connecticut Warbler: 15 May (1) CB (RB). Mourning Warbler: 13 May (1) TRG (KD, RB). Wilson's Warbler: 3 May (1) G (BM). Canada Warbler: last 25 May (1) K (JMC, RME).

Bobolinks-Sparrows: Bobolink: last 13 May (300) HRA (KD, RB). Baltimore Oriole: last 12 May (1) K (MM). Rusty Blackbird: last 12 May (1) K (MM). Rose-breasted Grosbeak: 5 May (1) CB (KD), 5 May (1) K (JMC, RME). Blue Grosbeak: 16 June (nest, 3 eggs) K (MG). Dickcissel: 7 July (1) G (ED). Savannah Sparrow: last 14 May (1) AM (KD). White-throated Sparrow: last 13 May (1) TRG (KD, RB). Lincoln's Sparrow: 5 May (2) CB (KD), 7 May (1) AM (KD).

Locations: AM—Amnicola Marsh, BL—Boone Lake, Ch—Chattanooga, CB—Chickamauga Battlefield, C—Concord, CL—Cove Lake, G—Greeneville, HRA—Hiwassee River Area, JC—Johnson City, K—Knoxville, LHS—Long Hallow Swamp, Marion County, Ma—Maryville, M—Morristown, NL—Nickajack Lake, NOL—Norris Lake, SB—Savannah Bay, SC—Scott County, TRG

—Tennessee River Gorge, WBL—Watts Bar Lake.

Observers: FA—Fred Alsop, WAB—W. A. Bridgforth, RB—Ralph Bullard, JMC—James M. Campbell, ED—Elva (Mrs. Chester) Darnell, JD—Jon DeVore, KD—Ken Dubke, RME—R. M. (Danny) Ellis, KG—K. Gaut, MG—Maurice Gribsby, JCH—Dr. Jos. C. Howell, EJ—E. Jeffers, KOS—Knoxville Chapter TOS, BL—Beth Lacy, BMc—Mrs. Beulah McGhee, GM—Geo. McGhee, BM—B. McGuire, RM—R. Miller, MM—Muriel (Mrs. Robert) Monroe, RN—Richard Nevius, FO—Francis (Mrs. Earl) Olson, MER—M. E. Richmond, WS—William Searle, BS—Boyd Sharp, ES—Ed Smith, CRS—Charles R. Smith, RS—R. Spees, JTT—Dr. James T. Tanner, CMW—Mrs. Clara May Wadtke, BW—Mrs. Beth Wuest.

JAMES M. CAMPBELL, 15 Hedgewood Dr., Knoxville 37918.

EASTERN MOUNTAIN REGION—*Herons-Sandpipers:* Green Heron 25 May (1) KS (JES, ETS), 2 June (1) MG (FA, RE), 16 June (1) GSM (KC), 6 July (1) CC (FA), 28 July (3) CC (FA). Canada Goose: 26 May (1) WL (LRH). Wood Duck: 22 May (1 male, 8 young E (CRS). Lesser Scaup: throughout season (pair) WL (CRS). Buffllehead: throughout season (3 males) WL (CRS). Turkey Vulture: 2 June (1) MG (FA, RE). Cooper's Hawk: 3 Aug (1) TF (ETS). Red-tailed Hawk: 15 July (1) CC (FA), 21 July (1) YM (FWB). Broad-winged Hawk: 22 May (1) E (FWB), 15 July (1) CC (FA), 18 July (1) E (FWB), 27 July (3) E (FWB). Ruffed Grouse: throughout season in small numbers E (CRS). Turkey: 23, 28 July (2 males) CC (FA), 30 July (3 males) CC (FA). Common Snipe: 1 May (1) last report, E (CRS). Spotted Sandpiper: 7, 10, 19, 26 May (1) E (CRS).

Cuckoos-Kinglets: Yellow-billed Cuckoo: throughout season E (CRS), 28 July (1) EC (RN). Black-billed Cuckoo: throughout season E (CRS). Barn Owl: 2 July (1) E (FWB). Whip-poor-will: 10 June (85) HM (EC). Chuck-will's-widow: throughout season (6) MC (CWF, CRS). Ruby-throated Hummingbird: only 5 records for period E (CRS), 2 June (1) MG (FA, RE), 2 June (1) CCB (RN), 28 July (1) EC (RN). Red-headed Woodpecker: 8 July (1) CC (FA). Hairy Woodpecker: 2 June (1) CCB (RN). Least Flycatcher: daily 22 June to 10 July (4) TF (FA), 13 July (4) TF (FA, JMC), 14, 19, 23 July (4) TF (FA), 28 July (1) LC (FA). Acadian Flycatcher: 2 June (1) MG (FA, RE). White-breasted Nuthatch: (2) E (CRS). Red-breasted Nuthatch: 16 June (4) GSM (KC). Winter Wren: 16 June (6) IG (KC). Bewick's Wren: 19 May (FWB). Veery: 16 June (3) GSM (KC). Swainson's Thrush: 18, 23 May (1) E (CRS). Golden-crowned Kinglet: 16 June (11) GSM (KC).

Vireos-Sparrows: Solitary Vireo: 8 July (1) CC (FA). Swainson's Warbler: 2 May (1) near CC (FA), 6 May (1) near CC (FA), 13 May (10) TF (FA, JMC), 14 May (1) TF (FA), 21 May (1) AF (FA, BW, LS), 22 May (1) TF (FA). Blackburnian Warbler: 16 June (4) GSM (KC). Chestnut-sided Warbler: 16 June (6) GSM (KC). Blackpoll Warbler: 2 June (1) GM (FA). Yellow-throated Warbler: 16 June (1) E (RLH). Canada Warbler: 2 June (1) CCB (RN). Baltimore Oriole: 26 May (1) G (FA), 2 June (1) G (FA), RE), 16 June (1) G (KC). Scarlet Tanager: 16 June (1) GSM (KC). Rose-breasted Grosbeak: 2 June (2) (nest) CCB 16 June (1) GSM (KC). Blue Grosbeak: (3) throughout period MC (CWF, GD, HD). White-throated Sparrow: 6 May (1) E (CWF).

Locations: AF—Abram's Falls, CC—Cades Cove, CCB—Camp Creek Bald, E—Elizabethton area, EC—Eden's Cabin, G—Gatlinburg, GSM—Great Smoky Mountain National Park, HM—Holston Mountain, IG—Indian Gap, KS—Kinzel Springs, LC—Laurel Creek, MC—Milligan College, MG—between Maryville and Gatlinburg, TF—Tremont Forks Road, WL—Wilbur Lake, YM—Yellow Lake.

Observers: FA—Fred Alsop, FWB—Fred W. Behrend, JMC—James M. Campbell, HD—Mrs. Harold Dillenbeck, GD—Mrs. George Dove, EC—Elizabethton Chapter TOS, RE—Ray Ellis, CWF—C. W. Fairbanks, LRH—Lee R. Herndon, KC—Knoxville Chapter TOS, RN—Ruth and/or Richard Nevius, MER—M. E. Richmond, JES—Janet Semmes, CRS—Charles R. Smith, ETS—Ed Smith, LS—Mr. and Mrs. Lewis Smith, BW—Mr. and Mrs. Bill Williams.

RAY M. ELLIS, 1 Hedgewood Dr., Knoxville 37918.

LEBANON—BIRD SANCTUARY

Lebanon Chapter of TOS voted, February 1968, to initiate the project of having Lebanon designated a Bird Sanctuary. Work toward that objective has developed in keeping with suggestions by the National Audubon Society and the National Garden Clubs of America.

Publicity and education have been the two main tools of action. Publicity has been toward planting of trees, shrubs and other plants to produce food and shelter for birds, as well as places for their nesting and protection. Education has been through the schools as well as "The Lebanon Democrat." Over 1,000 pupils in the city schools have heard talks on conservation, including birds. Merchants have donated prizes for posters made by the pupils. Many of these posters have been on display in store windows in Lebanon and at the State TOS convention. A weekly column about birds has been set up to appear in "The Lebanon Democrat," where frequent articles have already appeared to make Lebanon's citizens even more bird conscious.

Civic clubs, garden clubs, Scouts and other youth groups have been contacted and this effort will continue. The management of the Junior Achievement groups has agreed to request consideration of the making of bird houses and feeders when the next year's work is planned. Several groups of Boy Scouts have made bluebird houses. Government bulletins on plantings, feeders, and houses have been distributed and are available. A committee is working on appropriate signs which will be erected at highway entrances to the city. On 7 May, 1968, the Lebanon City Council by official action designated the city of Lebanon a Bird Sanctuary.

RUTH MERRITT, Route 6, Lebanon 37087.

NEW PRESIDENT-ELECT: GEORGE R. MAYFIELD, JR.

On 11 May 1968, the Tennessee Ornithological Society elected Dr. George Radford Mayfield, Jr. the Society's first President-elect. At the close of the 1969 State Meeting, Dr. Mayfield will officially take over the duties of the current President, Robert W. McGowan of Memphis.

George Mayfield has been an ardent member of T.O.S. during recent years and is a familiar face at the annual State Meetings. His mother has long been an active member of the Society and her attendance at the annual meetings dates back many years. Perhaps, to the year when she became what is believed to be the first female member of T.O.S.

Dr. George R. Mayfield, Sr. (1877-1964) became one of our five founders when T.O.S. was organized on 7 October 1915 at Nashville. As a member of the Nashville Chapter, he served as Chapter President and as President of T.O.S. Thus the Mayfields become the first father and son in organizational history to accept this top office in the Society.

Few men or women can claim a lifetime association with T.O.S. that dates back beyond their childhood memory. George Mayfield can! At the age of 41 he recalls, ". . . .I began attending T.O.S. meetings probably before I can remember but certainly by age three to five. . . . early meetings at 'Birds I View' on Stones River, Sycamore and Marrow Bone Creeks in Middle Tennessee and at the H. P. Ijams homeplace in the 1930's . . . these were days when the entire T.O.S. membership attending the spring meeting could be fed on the creek bank by one or two diligent cooks. After the early morning bird walks I usually ended up wading, building dams, and floating logs down the creek during the heat of the day."

During the "in between years—1942 to 1954" he experienced a hiatus with his birding activities. He became increasingly occupied with high school and his church choir. Later he was in medical school. As a graduate of Peabody Demonstration School in 1944, Mayfield enrolled and attended at Vanderbilt for two years.

In January 1946 he became a member of the U. S. Army, and later, a second lieutenant in the First Cavalry Division, 61st Field Artillery Battalion and assistant communications officer and spent a year in Japan.

Mayfield returned to college and graduated at Vanderbilt University in 1950. He completed study at Vanderbilt Medical School in 1956. In 1959 he concluded his training in Pathology at Charleston, West Virginia.

The years since, have been spent in Middle Tennessee where he has practiced pathology throughout the rural towns and at Maury County Hospital at Columbia, where he makes his home.

He is married to the former Cleo Gillund of Preston, Minnesota and they have three children, Rad (7), Mark (5) and Rebecca (2).

As a pilot, he has frequently flown his private plane to count vultures, hawks and herons on Christmas Counts. In addition he shares a similar interest in music as choir director at First Presbyterian Church in Columbia and the Columbia Choral Society.

RESIGNATION OF EDITORIAL STAFF MEMBER

It is with sincere regret that we announce the sudden and unexpected resignation of Wallace Coffey from the Editorial Staff of The Migrant, effective as of 27 September 1968. Many of the improvements in the quality of the material published and changes made in recent issues have been due to his tireless efforts in attempting to improve our journal since December 1966 when he assumed the position of Associate Editor.

BOOK REVIEW

The Shorebirds of North America. Editor and sponsor, Gardner Stout; text, Peter Matthiessen; paintings, Robert Verity Clem; species accounts, Ralph S. Palmer. 1967. New York, The Viking Press. 270 pp., 32 color plates, line drawings, 10½ x 12¼ in., cloth, $22.50.

The authors have collaborated to depict a glamorous sketch of each of the seventy-five species of shorebirds occurring regularly on the North American continent. Some of these species resemble other species so closely that many observers regard shorebords, as a group, to be so difficult to identify, that the time and effort required cannot be justified. These narratives attempt to dispel that attitude and present many helpful suggestions to assist in their identification. For instance, a species which closely resembles another species, in size, markings, and behavior, may seldom associate with the species which it so closely resembles, but associates with other species, from which it can be distinguished relatively easily; it may even favor an entirely different habitat.

The thirty-two water color paintings by Robert Verity Clem are exceptionally well done and would be of great assistance in identification when the birds are in spring or winter plumage, but many of the transition or confusing plumages are lacking, making it necessary to consult other sources for the more difficult identifications.

Almost half the book is devoted to the scientific "Species Accounts" by Ralph S. Palmer, which covers: plumage, moults, descriptions, field marks, voice, habitat, breeding range, nesting, habits, migration, and references. These characteristics are more complete than field guides can be and, therefore, would be very useful for reference purposes. It is an impressive book and one which anyone would be proud to possess.

LEE R. HERNDON, Route 6, Elizabethton 37643.

THE PRESIDENT'S MESSAGE

Thanks, T.O.S. members, for making our state meeting in Cookeville a resounding success. And especial thanks go to Professor Miser Richmond and his dedicated staff for their time and energy in planning and producing our pleasant and rewarding experience at Tennessee Technological University. Also, our nominating committee deserves our appreciation for their selection of our first President-elect, Dr. George Mayfield, Jr. We are indeed fortunate in being able to look forward to the capable leadership of a person of the caliber of Dr. Mayfield, who brings to our organization a long family heritage of devoted affiliation with T.O.S.

One year ago this month I wrote my first brief President's Message. I indicated then an awareness of future successes and future failures, and future knowledge to be gained from experience. I should like to indicate briefly some impressions seen through a year of experience.

During a very recent visit with our Secretary, Helen Dinkelspiel, we heartily agreed that the two year term of office for the officers of T.O.S. is excellent. Also, we agreed that the provisions calling for an election of a President-elect is certainly desirable. In this regard, I shall, at the appropriate time, make available to our new President-elect copy of all pertinent correspondence relative to the affairs of our organization. This can insure a continuity in the operation of the organization affairs without the previous lag in communication resulting from a temporary break-down in organization machinery.

I was pleased to see the large turnout of members for the Board of Directors' meeting in Cookeville. It is important for the total membership to be aware of and involved in the affairs of our organization, and I again extend an invitation for the members to attend these important meetings. The Board of Directors' meeting is the place where important affairs and issues are discussed and decided in a democratic manner. The individual director should function in more than a mere perfunctory manner. He should come to the meeting informed and involved, and willing to take back to the local chapter the results of discussion and decision. The only power your President needs is the power to request that the members help in solving fairly, in democratic procedure, any problem that might exist. I have endeavored to do just that this past year, and forgive me if I feel a bit satisfied with the results, but I do.

It is still my opinion that a creative and hard-working membership committee can make a considerable contribution to the future success of our organization. As one example, the city of Jackson, Tennessee, with four colleges and a population of around 50,000, has no organization such as ours. Some members regard a membership committee as having minimum value; others feel that it is the life-blood of an organization. I should like to hear at the next state meeting some discussion and recommendation regarding the need for and role of a membership committee.

We are fortunate that Mack Prichard, Parks Naturalist, Tennessee Division of State Parks, accepted the position as Coordinator of Conservation Activities. Let's give him our support, advising him of activities and conservation needs existing in our state. Here is a chance for us to have some communication state-wide on these affairs which are so dear to our hearts and to realize some concerted effort in their behalf. As Mack expressed so succinctly in his acceptance statement, our function surely must be more than to be "entertained by the birds." I enjoyed that phrase, but do you ever feel sometimes in the field that just maybe it is we who are entertaining the birds!

I commend the membership and the Editorial Staff of THE MIGRANT for the cooperative manner in which a solution to the circulation problems of the publication was reached. This has been a very real problem during the year and it was my earnest hope that a workable solution could be found during the state meetings. Once again I reiterate my belief that this organization is comprised of people who, when made aware of a problem and presented with possible solutions, will intelligently choose that solution which is fair and reasonable for all concerned.

Respectfully,
Robert W. McGowan

COME TO UPPER EAST TENNESSEE
FOR THE FIFTY-FOURTH ANNUAL STATE T.O.S.
MEETING 9, 10, 11 MAY 1969,

AT EAST TENNESSEE STATE UNIVERSITY,
JOHNSON CITY, TENNESSEE

There will be a paper session on 10 May, at which papers describing original research in the area of ornithology may be presented. If you should wish to participate in this paper session, please send the title and a synopsis of your topic and an estimation of the time required for its presentation to the Editor as soon as possible.

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, speific, and descriptive.

STYLE: Recent issues of THE MIGRANT should be used as a guide in the preparation of manuscripts. Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N. W., Washington, D. C. 20016.

COPY: Manuscripts should be typed double spaced on 8½ x 11" paper with adequate margins, for editorial notations, and should contain only entries intended for setting in type, except the serial page number. Tabular data should be entered on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper in black and white (not in color). Instructions to the editors should be given on a separate sheet. Weights and measurements should be in metric units. Dating should be in "continental" form (e.g., 7 March 1968).

NOMENCLATURE: Common names should be capitalized followed by binomial scientific name in italics only after the first occurrence in the text for both regular articles and ROUND TABLE NOTES, and should conform to the A.O.U. Check-list 5th edition, 1957. Trinomial should be used only after the specimen has been measured or compared with typical specimens.

BIBLIOGRAPHY: When there are more than five references in an article, they should be placed at the end of the article, otherwise they should be appropriately included in the text.

SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

REPRINTS: Reprints are available on request. Reprint requests should accompany article at the time of submission. Billing to authors will be through the state T.O.S. Treasurer.

Books for review and articles for publication should be submitted to the editor. Seasonal reports and items should be forwarded to the appropriate departmental editor whose name and address will be found on the inside front cover.

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THE MIGRANT

A QUARTERLY JOURNAL
DEVOTED TO TENNESSEE BIRDS

Birds

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NESTING OF BLUEBIRDS AT ASHLAND CITY

By Amelia R. Laskey and Martha F. Herbert

In 1968, the 60 nest boxes in the Neptune Community of Ashland City were checked weekly from 21 March through 28 August, when the final two broods of Eastern Bluebirds (*Sialia sialis*) were banded.

Although a few nest boxes were placed on his farm, Rabbit Hill, by John S. Herbert in 1963, the maximum number was not attained until 1967 and 1968, but no complete seasonal record was made until 1968 for the 60 nest boxes placed on fence posts on 6 miles of rural road within an estimated area of 3 square miles (1,800 acres). This area is 30 miles northwest of Nashville.

On 31 March, 11 boxes contained nest material; on 3 April first bluebird eggs of the season were laid in two nests. During the season, 53 of the boxes were used at least once by bluebirds, laying 119 sets of eggs (3 to 6 per clutch), totaling 502 eggs. From these, 347 hatched and 248 young fledged—49.4 per cent of the number of eggs laid.

In addition to the 119 clutches in the nest boxes, at least two broods successfully fledged from a martin house about 14 feet from the ground. Another brood of 5, hatched in a fence post, was taken by a predator.

From the nest boxes, 240 nestlings were banded, plus 6 from the martin house. Also 14 incubating or brooding females were banded and one was retrapped that had been banded in 1967 when checking of nests began in mid-season. She was in a nest box about ¾ of a mile from the one that she occupied in 1967.

Two of the nest boxes were used by Tufted Titmice (*Parus bicolor*) and one by a Carolina Chickadee (*Parus carolinensis*). One titmouse nest contained 8 eggs, from which 7 young fledged: the other of 6 eggs was unsuccessful. The chickadee set of 6 eggs was also unsuccessful, all eggs broken.

House Sparrows (*Passer domesticus*) made many attempts to occupy the nest boxes. From 21 March to 30 May, we removed 40 nests from 15 boxes. These nests were in various stages of construction, but from 9 of them, 44 eggs were removed. In some instances, bluebirds used the boxes later in the season.

Occasionally *Polistes* wasps started building and egg-laying, but these paper cells were removed immediately as was the nest of a bumble bee in another box.

Predators were responsible for most of the 43 complete nest failures. In two instances large snakes (*Elaphe* species) commonly called chicken or gray rat snakes, were found in the nests after consuming the contents. Among the totally unsuccessful nests, 17 were robbed of 59 eggs and 11 were robbed of 49 young. The nests were left intact which is typical of snake predation. Seven nests (30 eggs) were abandoned by the female for unknown reasons, but possibly on account of her death. Young were found dead in 5 nests (24 nestlings). From circumstantial evidence, pesticide spray is suspected in two instances and three instances of ant predation on 11 hatching eggs were noted. These boxes and posts were heavily dusted with pyrethrum powder to eliminate the ants.

One dead female was found in a disturbed nest. Early in the season, 21 March, a male bluebird was found dead in Box 27 with a partial nest and on 10 April, a freshly killed female was found in the same box. In both instances only the brains had been eaten by some small predator that could pass through the 1½ inch entrance. That box was then removed to another location.

The nest boxes are placed on fence posts, most of them about 5 feet from the ground. The approximate area of 3 square miles consists of mixed habitat—open meadows, planted fields of grain and tobacco, vegetable gardens, small orchards and wooded areas near Cheatham Dam, Cumberland River. Houses are scattered along the roadside in this beautiful country area with wild flowers along the way and lovely vistas of rolling hills and valleys (altitude 500-550 feet).

It is gratifying to note the fine population of bluebirds in the Neptune Community. Eastern Bluebirds have had difficulties during the past ten years due to the wide-spread use of poison sprays for insects and vegetation and the utilization of open areas for closely-built subdivisions. As bluebirds feed mainly on insects and wild fruits and do not adapt themselves to city environments, the country-home area of the Neptune Community is well suited to the needs of this attractive species.

All nest boxes were constructed and contributed by William F. Bell and placed by John S. Herbert. The residents of the area are very pleased and very cooperative in protecting the birds. Vandalism is non-existent.

Banding records are on file at the U. S. Bird Banding Laboratory so it is hoped that any band found on a dead bird will be reported. As each band has an individual number that identifies the bird, a report will furnish information on the movements of that bird and on its life span. The bander's report to the Bird Banding Laboratory for a nestling bluebird banded 14 Aug. 1968 in the Neptune Community must be coded for IBM as follows:
4474-107-134958-766-3-HY-U-2-82-361-0870-08-14-68. The band shows only 107-134958 and the legend "Notify F & W S Wash. D. C.

1521 Graybar Lane, Nashville, 37215; 611 Lynnbrook Rd., Nashville, 37215.

THE 1968 CHRISTMAS SEASON BIRD COUNT

JON E. DEVORE, *Editor*

The thirty-ninth annual Christmas Season Bird Count listed a total of 125 species. This represents the second highest number of species ever recorded in the history of the Tennessee counts. The largest number of species ever recorded was in 1965 when 130 species were observed throughout the state. One new species was added to the total list, it being the Eastern Kingbird seen on the Norris count.

Apparently northern finches returned to the state in good numbers this winter, with Evening Grosbeaks, Pine Siskins, Red-breasted Nuthatches, and Purple Finches being well distributed in the eastern portion of the state with lesser numbers being noted as one moves west across the state. Species, other than the Eastern Kingbird, which were of special interest included: Pigeon Hawk, Orange-crowned Warbler, and Le Conte's Sparrow at Memphis; Golden Eagles and Tree Sparrows at Reelfoot; Long-eared Owls at Columbia; Greater Scaup at Chattanooga; Least Sandpipers and Dunlin at Hiwassee; Green Heron, Dunlin, and Common Redpoll at Knoxville; Short-billed Marsh Wren and Henslow's Sparrow at Great Smoky Mountains National Park; and Red Crossbills at Elizabethton and Bristol.

INFORMATION ON THE COUNTS

Seventeen areas, including two high altitude areas, conducted counts this year. In the table and the information which follows, the areas are listed in order of their occurrence from west to east. The two high altitude counts are not listed on the table but are described in full in their appropriate place in the information.

MEMPHIS—All points within a 15-mile diameter circle, center Highland Heights; roughly 1953 areas; wooded bottomlands, 25%; deciduous woods, city parks and cemeteries, 30%; pastures and bare fields, 12%; suburban roadsides, 30%; river edge, 3%. 22 December: 6:50 a.m. to 5:00 p.m., almost steady drizzle in a.m., overcast in p.m. Temp. 51°; wind SW, 0-13 m.p.h., some standing water (36 hour drizzle). Nineteen observers in seven parties. Total party-hours 68 (50 on foot, 18 by car); total party miles 156 (49 on foot, 107 by car).

Pigeon Hawk (Alice Smith, first on Memphis Count); Catbird (Mr. & Mrs. Henry Dinkelspiel, George Hervey); Orange-crowned Warbler (Jack Embury); Le Conte's and Tree Sparrows (Mrs. Ben B. Coffey). Seen in area during count period but not on count day: Yellow-breasted Chat (12-16 Dec. Victor Julia; 24 Dec. and 2 Jan. Mrs. Ben B. Coffey), Evening Grosbeak (25 Dec. on, Dr. W. L. Whittemore, Mrs. Ben B. Coffey).

Mr. and Mrs. Ben B. Coffey, Jr. (compilers), Dr. Julian Darlington, Mary Davant, Mr. and Mrs. Henry Dinkelspiel, Jack Embury, Earl J. Fuller, George

THE 1968 CHRISTMAS SEASON BIRD COUNTS

	Memphis	Reelfoot	Henderson	Savannah	Columbia	Nashville	Lebanon	Cookeville	Chattanooga	Hiwassee	Norris	Knoxville	GSMNP	Greeneville	Elizabethton	Bristol
Common Loon	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--
Horned Grebe	--	--	--	3	--	--	--	--	7	--	--	--	--	--	--	1
Pied-billed Grebe	--	6	4	1	2	1	--	2	1	--	--	--	--	--	5	15
Dbl.-crested Cormorant	--	1	--	--	--	--	--	--	3	--	--	--	--	--	--	--
Great Blue Heron	--	9	--	--	12	2	200	1	--	49	1	3	--	--	1	7
Green Heron	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
Canada Goose	--	15000	--	--	22	--	70	--	2	1625	--	--	--	52	--	--
Snow Goose	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
Blue Goose	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Egyptain Goose	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
Mallard	32	44000	--	--	109	1	1016	--	10	414	1	27	--	--	14	4
Black Duck	--	650	--	--	89	--	1000	--	56	439	6	32	--	2	--	2
Gadwall	--	725	--	--	--	--	300	--	3	40	3	27	--	--	--	--
Pintail	--	65	--	--	--	--	100	--	--	5	--	--	--	--	--	--
Gr.-winged Teal	--	45	--	--	6	--	100	--	--	30	--	--	--	--	--	--
Bl.-winged Teal	--	--	--	--	--	--	100	--	--	--	--	--	--	--	--	--
American Widgeon	--	310	--	1	4	--	--	--	--	44	--	--	--	--	--	--
Shoveler	--	125	--	--	--	--	150	--	--	--	--	--	--	--	--	--
Wood Duck	6	175	--	--	1	--	50	--	3	--	--	2	--	--	--	--
Redhead	--	10	--	--	--	3	40	--	--	--	2	--	--	--	--	--
Ring-necked Duck	--	2800	--	--	19	100	12	--	--	--	--	8	--	--	66	--
Canvasback	--	140	--	--	--	29	15	--	--	--	--	1	--	--	--	--
Greater Scaup	--	--	--	--	--	--	--	--	70	--	--	--	--	--	--	--
Lesser Scaup	5	225	--	5	56	50	12	--	26	--	--	29	--	--	12	1
Common Goldeneye	--	55	--	36	--	40	--	--	1	--	--	16	--	--	--	1
Bufflehead	--	115	--	40	--	7	--	--	3	22	--	3	--	--	33	--
Ruddy Duck	--	20	--	--	1	--	20	--	--	--	--	--	--	--	--	--
Hooded Merganser	4	25	--	2	7	--	30	--	1	4	15	--	--	--	--	3
Common Merganser	--	--	--	--	--	--	30	--	--	--	--	--	--	--	--	--
Turkey Vulture	--	1	20	7	3	1	400	--	2	--	--	--	4	19	--	3
Black Vulture	--	--	4	--	225	8	8	--	--	14	--	--	--	43	--	4
Sharp-shinned Hawk	1	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--
Coopers Hawk	--	1	--	--	--	1	--	1	1	1	--	1	--	--	--	1
Red-tailed Hawk	13	16	2	4	4	15	--	1	10	7	4	1	1	--	--	--
Red-shouldered Hawk	--	3	--	--	--	--	--	--	2	--	--	1	--	--	--	--
Golden Eagle	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bald Eagle	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Marsh Hawk	1	5	--	1	3	1	--	--	1	3	--	--	--	1	--	--
Osprey	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pigeon Hawk	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Memphis	Reel-foot	Hender-son	Savan-nah	Colum-bia	Nash-ville	Leba-non	Cooke-ville	Chatta-nooga	Hiwas-see	Norris	Knox-ville	GSMNP	Greene-ville	Eliza-bethton	Bristol
Sparrow Hawk	9	6	4	--	12	45	2	6	10	3	--	2	4	1	3	3
Ruffed Grouse	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--
Bobwhite	38	1	5	25	45	90	63	26	62	78	13	32	26	70	12	7
American Coot	--	302	--	435	133	150	20	--	85	1	--	20	--	--	--	--
Killdeer	11	4	3	18	3	35	102	7	56	136	5	97	11	2	5	13
American Woodcock	1	--	--	--	1	--	--	--	4	--	--	--	--	--	--	--
Common Snipe	2	--	--	15	28	3	--	--	16	31	--	67	--	1	3	1
Least Sandpiper	--	--	--	--	--	--	--	--	--	7	--	--	--	--	--	--
Dunlin	--	--	--	--	--	--	--	--	--	79	--	2	--	--	--	--
Herring Gull	--	75	--	--	--	--	--	--	5	48	--	2	--	--	--	--
Ring-billed Gull	12	69	--	1	--	--	--	--	73	161	--	140	--	--	--	2
Mourning Dove	301	11	14	14	165	86	29	60	221	161	125	183	210	177	1	167
Barn Owl	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--
Screech Owl	--	--	--	3	--	1	3	1	2	--	1	1	--	1	1	--
Great Horned Owl	--	1	--	--	4	1	--	--	1	--	--	2	--	--	--	2
Barred Owl	1	2	--	--	--	--	--	--	1	--	--	--	--	--	--	--
Long-eared Owl	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Belted Kingfisher	1	4	--	7	8	6	--	--	12	9	5	13	17	2	--	4
Yellow-shafted Flicker	222	60	1	7	12	36	7	9	34	6	4	11	3	3	6	1
Pileated Woodpecker	8	3	1	9	7	16	2	6	17	6	8	11	3	6	3	4
Red-bellied Woodpecker	75	38	4	15	18	84	12	10	16	7	10	31	1	7	3	1
Red-headed Woodpecker	13	12	--	--	1	1	--	3	--	4	1	--	--	--	--	--
Yellow-bellied Sapsucker	30	8	3	5	4	18	1	2	9	--	3	12	2	--	2	--
Hairy Woodpecker	16	8	--	2	8	14	5	6	19	4	4	5	1	1	--	1
Downy Woodpecker	25	17	4	8	24	60	11	11	56	5	18	27	23	11	14	5
Eastern Kingbird	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
Eastern Phoebe	--	--	--	--	2	--	--	--	3	2	2	--	2	1	1	--
Horned Lark	263	37	--	--	10	48	--	20	33	36	--	37	--	2	--	--
Tree Swallow	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blue Jay	477	37	3	8	18	27	50	25	134	9	7	42	4	19	9	8
Common Raven	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--
Common Crow	44	277	10	19	53	424	36	38	178	995	148	199	166	6500	347	92
Fish Crow	45	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bl.-capped Chickadee	--	--	--	--	--	--	--	--	--	--	--	--	6	--	--	--
Carolina Chickadee	100	58	4	56	78	223	47	9	192	30	103	153	103	49	44	35
Tufted Titmouse	45	57	12	39	39	232	77	32	128	5	92	62	51	47	22	10
Wh.-breasted Nuthatch	2	1	1	10	2	17	4	13	37	1	36	34	10	15	7	8
Red-breasted Nuthatch	3	--	--	--	--	1	1	--	12	6	6	24	11	1	3	2
Brown Creeper	8	3	1	7	--	11	1	--	7	--	1	3	2	4	5	2
Winter Wren	6	3	2	1	1	--	--	--	7	1	1	--	1	2	3	1
Bewicks Wren	--	--	--	1	1	6	7	--	2	--	--	--	1	1	--	--
Carolina Wren	95	40	2	22	6	46	3	24	60	6	38	101	39	14	10	4
Sh.-billed Marsh Wren	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Mockingbird	177	14	4	9	28	129	32	12	183	31	72	183	45	31	14	29
Catbird	1	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--

	Memphis	Reel-foot	Hender-son	Savan-nah	Colum-bia	Nash-ville	Leba-non	Cooke-ville	Chatta-nooga	Hiwas-see	Norris	Knox-ville	GSMNP	Greene-ville	Eliza-bethton	Bristol
Brown Thrasher	23	7	--	1	1	--	--	3	10	--	2	1	--	5	--	--
Robin	1583	19	--	12	18	32	--	4	183	5	72	129	6	1	9	7
Hermit Thrush	9	2	--	2	1	1	--	--	4	--	--	1	1	--	--	1
Eastern Bluebird	1	5	2	4	12	38	19	14	70	16	46	15	7	--	12	28
Golden-crowned Kinglet	30	8	2	28	2	7	--	--	16	5	3	43	142	5	10	6
Ruby-crowned Kinglet	33	12	1	7	1	--	--	--	12	3	4	7	3	--	--	1
Water Pipit	--	--	--	--	--	--	--	--	--	80	--	--	--	--	--	--
Cedar Waxwing	403	6	--	5	--	24	--	--	267	8	32	38	--	--	4	--
Loggerhead Shrike	23	9	5	3	13	11	3	--	14	9	6	12	4	6	4	3
Starling	28875	5321	367	170	1400	2226	623	--	2257	855	300	2922	238	450	405	649
Orange-crowned Warbler	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Myrtle Warbler	59	19	--	1	2	7	--	--	24	--	4	8	18	--	3	1
Pine Warbler	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
House Sparrow	640	269	23	20	100	--	123	104	167	6	45	132	70	83	208	136
Eastern Meadowlark	165	50	2	75	85	377	103	49	237	195	104	241	60	85	20	3
Red-winged Blackbird	11687	18000	1200	525	250	50	10	2	1560	29	15	41	25	--	--	--
Rusty Blackbird	45	220	--	--	44	21	--	4	32	--	--	159	--	--	--	--
Common Grackle	12250	5000	700	20	1800	234	3	19	15	1	--	53	55	--	4	1
Br.-headed Cowbird	814	1000	--	4	22	3	--	7	25	90	10	1	--	--	1	--
Cardinal	652	155	42	64	80	651	125	95	422	52	213	386	182	126	94	77
Evening Grosbeak	--	7	11	--	--	2	14	--	99	--	41	6	35	99	2	34
Purple Finch	44	13	1	3	6	173	18	2	75	15	105	90	2	--	1	11
Common Redpoll	--	--	--	--	--	--	--	--	--	--	--	3	--	--	--	--
Pine Siskin	--	--	--	--	--	--	--	--	123	1	12	11	18	--	--	--
American Goldfinch	219	105	--	22	16	391	3	60	455	152	19	284	122	67	67	95
Red Crossbill	--	--	--	--	--	--	--	--	--	--	--	--	8	--	30	17
Rufous-sided Towhee	132	8	11	11	34	122	19	43	157	43	29	79	10	13	2	--
Savannah Sparrow	13	--	--	1	23	--	--	--	5	1	--	9	2	--	--	--
Le Contes Sparrow	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Henslows Sparrow	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Vesper Sparrow	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
Slate-colored Junco	380	26	38	184	12	934	65	50	423	86	188	79	83	33	111	94
Tree Sparrow	2	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chipping Sparrow	--	--	--	--	--	--	--	--	6	--	--	--	--	--	--	--
Field Sparrow	104	19	23	110	48	254	2	28	590	147	125	128	156	109	9	31
White-crowned Sparrow	8	--	--	--	62	88	36	8	20	2	3	18	--	14	--	10
White-throated Sparrow	887	87	20	68	109	181	5	41	355	55	347	182	139	52	29	4
Fox Sparrow	49	4	--	13	11	10	--	--	11	--	1	1	5	--	--	--
Swamp Sparrow	118	23	6	7	15	2	--	--	53	--	--	18	3	--	--	--
Song Sparrow	347	24	20	18	56	68	3	13	129	51	70	237	124	35	20	20
Total Individuals	61692	56552	2582	2215	5499	7976	5342	875	9696	6472	2532	6985	2277	8270	1694	1673
Total Species	68	85	40	61	71	66	58	44	84	66	64	74	58	48	49	55

Hervey, Oliver Irwin, Edward M. King, Kenneth Leggett, Ella Ragland, Ernest Restivo, Alice Smith, Dr. and Mrs. Arlo I. Smith, Lynn Smith, Dr. L. P. Wilson.

REELFOOT LAKE—All points within a 15-mile diameter circle, center in Reelfoot Lake on west side of Starve Pond, extending northward to north end of Lake 9 in Kentucky, eastward to bridge on South Reelfoot Creek near Protemus and to the town of Hornbeak, southward to north end of Lake Isom Refuge, westward to Mississippi River; deciduous woods, 30%; fields and pastures, 50%; lakes and swamps, 10%; river, 5%, towns, 5. 27 December: 6:00 a.m. to 5:00 p.m., cloudy, intermittent rain. Temp. 52° to 55°; wind SE, 15-25 m.p.h. Ten observers in four parties. Total party-hours 34 (14 on foot, 20 by car); total party-miles 234 (15 on foot, 219 by car).

Seen in area during count period but not on count day: White-crowned Sparrow, Common Snipe.

Evelyn Cole, John DeLime, Williard Gray, Janice Leggett, Kenneth Leggett (compiler), Clell Peterson, Arlo Smith, Kaye Smith, Noreen Smith, Bettie Sumara.

HENDERSON—All points within a 15-mile diameter circle, center just inside west city limits of Henderson, east to shore of Lake LaJoie in Chickasaw Park. Area includes Highway 100, Chickasaw Park, Fire Tower, Hughes Road south to Montezuma, Silverton and surrounding area. 26 December: 6:45 a.m. to 4:45 p.m. Temp. 44° to 55°; wind 8-20 m.p.h., wind brisk most of day with a smooth cloud cover. One observer in one party. Total party-hours 10 (3 on foot, 7 by car); total party-miles 54.6 (5 on foot, 49.6 by car).

The 20 Turkey Vultures and 9 Black Vultures were seen on way to roost. Eleven Evening Grosbeaks were at the feeder in yard; first appeared on 22 November.

Mrs. E. M. Carpenter, Sr.

SAVANNAH—All points within a 15-mile diameter circle, center six miles SE of Savannah courthouse. 1 January: 7:30 a.m. to 5:30 p.m. Temp. 16° to 30°; wind N, 0-10 m.p.h., clear during day. Four observers in one party. Total party-hours 10; total party-miles 60.

David Patterson (compiler), Mike Patterson, Paul Patterson, Roger Patterson.

COLUMBIA—All points within a 15-mile diameter circle, center 1 mile west of Zion Church to include Columbia, Mt. Pleasant, Arrow Lake, Hampshire, Williamsport, Duck River and Monsanto Ponds; Deciduous woods, 20%; fields and pastures, 50%; swamps, lakes, and riverbanks, 15%; farmyards, 5%, towns, 10%. 26 December: 7:00 a.m. to 6:00 p.m. Temp. 32° to 50°; wind SE 5-12 m.p.h., weather mostly cloudy. Six observers in four parties. Total party-hours 15; total party-miles 180.

The two Long-eared Owls were found in the same pine thicket as in 1965 by Daniel Gray III.

William Dale, William Fugua, Daniel Gray III, Cleo Mayfield, George R. Mayfield, Jr. (complier), Evelyn Ridley.

NASHVILLE—All points within a 15-mile diameter circle, center on the Harpeth River bridge over Tennessee Highway 100. Radnor Lake was included. Deciduous wooded hills, 40%; fields and pastures, 25%; riverbottom fields, 20%; roadsides and suburban yards, including 11 feeding stations, 15%. 28 December: 6:30 a.m. to 5:00 p.m. Temp. 41° to 36°; wind NNW 6-30 m.p.h. and very gusty; a light rain at daybreak, then overcast the rest of the day. Thirty-eight observers in eight parties, plus eleven at home feeders in area. Total party-hours 59 (38.5 on foot, 20.5 by car); total party-miles 163 (33 on foot, 130 by car).

Mr. and Mrs. Clyde Anderson, Mrs. Ann Arnett, Mr. and Mrs. William F. Bell, Sr., Mike Bierly, Ruth Castles, Annella Creech, Mrs. Leon DeBrohun, Charles DeWitt, Sam Doak, Mrs. Nelson Elam, Mrs. Erline Elmore, John Ellis, Dr. Charles Farrell, Albert F. Ganier, Katherine Goodpasture, Ben Groce, Mr. and Mrs. John Herbert, Mrs. A. B. Herron, Louise Jackson, Carol Knauth, Margaret Mann, Harry Monk, Mrs. Robert Nichols, Mr. and Mrs. L. E. Nordholt, Henry E. Parmer (compiler), Ellen Ttringer, Mrs. Ann Tarbell, Lawrence Trabue, Bob and Bill Trammell, Ruth White, Mr. and Mrs. George Woodring, Virginia Workman.

LEBANON—All points within a 15-mile diameter circle, center on the Lebanon square, including wooded areas, back yards, Old Hickory Lake Refuge, and open country. 27 December: daylight to dark. Temp 30° to 40°, light intermittent rain, strong biting north wind.

Doug Allen, Mrs. Winstead Bone, Mrs. George Bouton, Mrs. Glenn Burchett, Miss Martha Campbell, Miss Margaret Campbell, Mrs. Louise Chambers, Mr. and Mrs. Clay D. Couch, Mrs. Robert Cox, Mrs. Alyne Eastes, Mrs. Carter Farris, Miss Burta Ferrell, Mrs. Emmet Gaston, Mrs. S. B. Gilreath, Grady Graves, Mrs. John Graves, Mrs. Roy Hobbs, Dr. and Mrs. M. S. Howard, Mr. and Mrs. Paul S. Hunton, Mr. and Mrs. Thurman Jamison, Dick Lawler, Mrs. Sam B. McFarland, Mr. and Mrs. Dixon Merritt, Mr. and Mrs. Byron S. Paul (compilers), John Sellers, Mr. and Mrs. Porter Taylor, Mrs. Henry Waters, Mrs. William Welty, Mrs. Luke Williams, Miss Mary Wharton, Dr. and Mrs. R. D. Wilkinson.

COOKEVILLE—All points within a 15-mile diameter circle, center on the city of Cookeville. Included in the area is yard and garden space, open country, fields and woods, city lake area, and swamp area. 27 December: 7:00 a.m. to 5:00 p.m. Temp. 50° to 55°; wind 5-15 m.p.h., day was cloudy, windy, and with intermittent rain, especially in the afternoon. Eleven observers. Total party-hours 54; total party-miles 85 (7 on foot, 78 by car).

Dr. and Mrs. J. O. Cummins, Caprice Haile, Mr. R. D. High, Mr. Roy T. Hinds, Dr. Paul L. Hollister, Amy Johnson, Dr. and Mrs. Sidney L. McGee, Annice Moore, Mr. Miser R. Richmond, Ken Rogers, Marie White (compiler).

CHATTANOOGA—All points within a 15-mile diameter circle, center on the National Cemetery; fields and pastures, 35%; woodlands, 20%; ponds and lakes, 15%; creeks and rivers, 15%; roadsides, 10%; and residential areas, 5%. 29 December: 6:00 a.m. to 7:00 p.m. Temp. 33° to 44°; wind NNW 0-2 m.p.h., very scattered clouds in the early a.m., then clearing with no clouds in the late a.m. or p.m., bright sun in the p.m. Thirty-one observers in fourteen parties. Total party-hours 105 (68 on foot, 37 by car); total party-miles 562 (82 on foot, 480 by car).

The Greater Scaup were observed under excellent light conditions and in comparison with Lesser Scaup on Chickamauga Lake. Birds had been present for some time and have been seen by several observers.

Francis Barnwell, Mr. and Mrs. T. S. Barr, Pam Bowmen, Ralph Bullard, Dr. W. K. Butts, Maxine Crownover, Jon E. DeVore (compiler), Mark and Helen DeVore, Kenneth H. Dubke, Roy Evenson, Dr. and Mrs. John R. Freeman, James Garrett, Howard and Mary Lou Meadors, Gladys C. Nelson, Mable Norman, Beulah Parks, Eugene and Eva Ranger, Theo L. Rogers, Veta Sliger, Mary Tunsberg, Jack and Mark Wagner, Adele and Gene West, Mrs. Collin S. Wilcox, Mrs. H. B. Wilkinson.

HIWASSEE—All points within a 15-mile diameter circle, center on State Highway 58 bridge at the Hiwassee River; agricultural fields, 30%; deciduous woods, 30%; creeks and rivers, 15%; residential areas, 10%; roadside and weedy areas, 10%; evergreen woods, 5%. 27 December: 6:00 a.m. to 5:15 p.m. Temp 38° to 54°; wind S, 1-12 m.p.h., light overcast in the early a.m., heavier clouds in the early p.m. with occasional drizzle in the late p.m. Five observers in three parties. Total party-hours 27 (13 on foot, 14 by car); total party-miles 284 (37 on foot, 247 by car).

The Dunlin were found at three separate locations. The Least Sandpipers were found with a small group of Dunlin at the Mouse Creek area to the eastern edge of the count circle. Both species had been present all fall and had been seen by several observers.

Ralph Bullard, Jon E. DeVore (compiler), Kenneth H. Dubke, Adele and Gene West.

NORRIS—All points within a 15-mile diameter circle, center on BM 1062 Norris Dam, to include Clinch River, Hinds Creeks, Clear Creek, Norris Lake, Cane Creek, Norris, Andersonville, Lake City; mixed hardwoods, cedars, and pines, 55%; fields and pastures, 40%; towns, 5%. 21 December: 5:00 a.m. to 5:00 p.m. Temp. 27° to 43°; wind, calm, clear in a.m., cloudy in p.m., light rain last hour, all water areas open.

The Eastern Kingbird was observed on the count day by Richard B. Fitz, biologist with the T.V.A. Bird was viewed with 8 x 30 binoculars as it was perched in the field edge of a brushy swale bordering Byrams Fork of Hinds Creek near the Lone Mountain Community east of Andersonville. The bird was seen the following day by Francis Olson of Norris. Seen in area during count period but not on count day: Wood Duck, Common Goldeneye, Sparrow Hawk, Ruffed Grouse, Hermit Thrush.

James H. Burbank (compiler), Richard B. Fitz, Gordon E. Hall, Ben D. Jaco, Frances Moore, Francis Olson.

KNOXVILLE—All points within a 15-mile diameter circle, center on Oak Ridge Highway at Third Creek; deciduous woods and pine woods, 25%; fields and pastures, 16%; roadsides and brushy fields, 25%; residential areas, 20%; lakes and marshes, 14%: 29 December: 6:30 a.m. to 6:30 p.m. Temp. 28° to 42°; wind, variable and light, partly cloudy to clear. Twenty-one observers in ten parties. Total party-hours 80 (44 on foot, 36 by car); total party-miles 340 (32 on foot, 308 by car).

The Green Heron was identified by Tony Koella, and was the second time for this species on a Christmas Count. The Common Redpolls were seen at a feeding station where they had been seen on other days. They were identified by Mrs. Terry McGown who was familiar with them in Canada.

Mrs. A. B. Burritt, J. M. Campbell, R. J. Dunbar, Danny Ellis, John Elson, Elizabeth French, Maurice Grigsby, Mrs. Elizabeth Henry, Gale Hobbs, W. M. Johnson, Tony Koella, Terry McGown, Muriel Monroe, Julia Moore, Louise Nunnally, Owell Puckett, Lynn Satterfield, Steve Satterfield, Terry Satterfield, Boyd Sharp, J. T. Tanner (compiler).

GREAT SMOKY MOUNTAINS NATIONAL PARK, TENN.-N.C.—All points within a 15-mile diameter circle, centered on Bullhead, to include US 441 from Pigeon Forge to Kephart Prong; Tenn. 73 from Pittman Center to Metcalf Bottoms; Appalachian Trail from Mount Collins to Newfound Gap; West Prong Little Pigeon River; Little River; Cherokee Orchard; Emerts Cove; Wear Cove; LeConte Creek; open farm land, 5%; abandoned fields, 10%; stream courses, 25%; farm woodlots, 5%; deciduous forests, 25%; pine forests, 10%; spruce-fir forests, 15%; towns, 5%. 22 December: 7:00 a.m. to 6:00 p.m. Temp 34° to 55°; wind, variable 5 to 30 m.p.h. with gusts up to 40 m.p.h. Overcast and rain all day with 0.40 inches of rain in the lower elevations and 1.58 inches in the higher elevations.

Three birds were seen for the first time on the Smokies Christmas Count. These were the Blue Goose, Henslow's Sparrow and the Short-billed Marsh Wren. The Blue Goose is of special interest since it has been observed in the river in Gatlinburg since October, 1967. It appeared after the bird kill at the Ski Resort that year, and although it is a normal healthy bird, capable of flight, it has made no attempt to leave.

Gilbert Banner, Joshua Banner, James Campbell, Robert J. Dunbar, Danny Ellis, Miss Mary Enloe, Maurice E. Grigsby, Miss Gale Hobbs, Dr. Joseph C. Howell, Miss Susan Hoyle, Mrs. George McGown, Robert A. Monroe, Miss Louise Nunnally, Mrs. Holly Overton, Stephen Satterfield, Terry Satterfield, A. Boyd Sharp, Jr., Ed Smith, Arthur Stupka, Mrs. Arthur Stupka, Richard C. Zani (compiler).

COSBY—Eastern end of the Great Smoky Mountains National Park from Cosby Recreation area to Low Gap. 5 January: 9:00 a.m. to 3:00 p.m. Temp. 12° to 24°, clear to cloudy. Total party-miles 5 (5 on foot). Four observers in one party.

Belted Kingfisher 1, Red-bellied Woodpecker 2, Yellow-bellied Sapsucker 5, Hairy Woodpecker 7, Downy Woodpecker 2, Common Crow 2, Carolina and Black-capped Chickadees 12, Tufted Titmouse 8, Red-breasted Nuthatch 5, Carolina Wren 2, Hermit Thrush 1, Golden-crowned Kinglet 15, Ruby-crowned Kinglet 1, Cardinal 3, Evening Grosbeak 13, Pine Siskin 5, Slate-colored Junco 2, White-crowned Sparrow 1.

Bob Holt, Roger Miller, Richard Nevius, Dr. R. B. Spees.

GREENEVILLE—All points within a 15-mile diameter circle, center three miles west of Greeneville on Highway 11-E. Woodlands, 50%; fields, 40%; pastures, ponds, stream, and town, 10%. 29 December: 7:30 a.m. to 6:15 p.m.

Temp. 30° to 40°; wind, variable 0-10 m.p.h., cloudy to clear. Thirteen observers in nine parties. Total party-hours 57; total party-miles 54 (24 on foot, 30 by car).

Mr. and Mrs. Chester Darnell (compilers), Roger Draper, William Fischer, David Johnson, Irving Landmark, S. R. McGuire, Richard Nevius, Randy Russell, Richard Sievert, Dr. and Mrs. Royal B. Spees, Mrs. E. T. Shaw.

ELIZABETHTON—All points within a 15-mile diameter circle, center Wilbur Dam, to include Wilbur Lake, major portions of Watauga Lake, parts of Watauga and Doe Rivers, parts of South Holston and Iron Mountains, city of Elizabethton; lake borders, 5%; stream borders, 50%; woodlands, 30%; weed fields, 15%. 29 December: 7:00 a.m. to 6:00 p.m. Temp. 22° to 38°; wind WNW, 0-15 m.p.h., cloudy, windy all day; no snow cover, all waters clear. Seven observers in four parties. Total party-hours 27.5 (12 on foot, 15.5 by car); total party-miles 186.8 (7.5 on foot, 179.3 by car).

Fred Behrend, Mrs. Harold Dillenbeck, Joy Dillenbeck, Mrs. George Dove, Roby May, Craig Shepherd, Charles Smith (compiler).

BRISTOL, TENN.-VA.—All points within a 15-mile diameter circle, center at junction of U.S. 11 and Route 625, to include Bristol, South Holston Lake and river; fields and farmland, 40%; mixed deciduous forest, 25%; lakes and rivers, 15%; towns and residential, 10%; mixed, 10%. 29 December: 6:30 a.m. to 5:45 p.m. Temp. 28° to 33°; wind NE, 0-5 m.p.h., generally clear, no snow cover, waters open. Eight observers in five parties. Total party-hours 15.75 (10.25 on foot, 5.5 by car); total party-miles 114 (3 on foot, 111 by car).

The 17 Red Crossbills were observed at the County Park near the U.S. 421 Highway Bridge at South Holston Lake. This represents a first for our count and the flock was observed by J. Wallace Coffey as they fed from the cones of Virginia Pines. The flock appeared to be mixed males and females. They were approached within 15 feet and the red plumage and crossed bills were very evident. They frequently perched in exposed positions and the call notes of the flock could easily be heard. The period of observation was about ten minutes.

J. Wallace Coffey (compiler), Mr. and Mrs. H. C. Epperson, Enno VanGelder, Roger VanGelder, David McPeak, Nancy McPeak, C. T. Ottenfeld.

ROAN MOUNTAIN—From Roan Valley settlement of summer cottages at 4750 feet along mountain road and through pasture and woodland to Carvers Gap at 5500 feet. On Forest Service highway and along "Balsam Road" through coniferous forest to Rhododendron Gardens. Return by Forest Service highway to Carvers Gap and starting point. 24 December: eight and one-quarter hours. Temp. 14° at start, 8° at mid-day, 15° at finish; wind NNW, mostly 30 to 40 m.p.h., brilliant sunshine. High wind making dry snow in pasture and other open areas swirl in clouds. Snow up to 8 inches deep, except on highway from which blown off by wind. "Balsam Road" very slick with ice under snow. Three observers in one party. Total party-hours 9; total party-miles 18.

Ruffed Grouse 1, Hairy Woodpecker 1, Downy Woodpecker 2, Red-breasted Nuthatch 8, Slate-colored Junco 6, Song Sparrow 1 (an unusual occurrence at 4700 foot elevation).

Fred Behrend (compiler), Jim Finucane, Joe Finucane,

ROUND TABLE NOTES

SONG SPARROW NESTS AT COOKEVILLE—On 11 May 1968, at the request of Mrs. James (Caprice) Haile, it was my privilege to drive Mr. Albert Ganier and Mrs. Amelia Laskey out to Mrs. Haile's to examine a nest in her garden which she was reasonably sure was that of a Song Sparrow (*Melospiza melodia*). She had seen and heard the Song Sparrow and had seen the bird leaving the nest. The nest held 2 small young a few hours old, 2 unhatched eggs of the sparrow and one egg of a Cowbird. Mr. Ganier identified the eggs of the Song Sparrow and removed the Cowbird egg. The nest was built deep down in a lush clump of day lilies which grew in a garden. The parent bird flew from the nest, remained near and later came close, making identification positive. Two days later, the sparrow eggs were found to have hatched. This nest was on the outskirts of Cookeville. Song Sparrows have been seen in Cookeville in several different areas during breeding season but so far no other nests have been found.

Beulah Clark, Route 4, Cookeville 38501.

EDITOR'S NOTE: This is the most westerly nest in Tennessee as yet recorded. In *The Migrant* 36:60, Ben B. Coffey recorded them in breeding season even further west, viz. Manchester, but did not succeed in finding a nest.

MISSISSIPPI KITES AT REELFOOT—About noon on 2 September 1968, my wife and I were driving toward the Mississippi River ferry near Tiptonville. We noticed four hawks soaring over the sandy area and dump just east of the ferry. We were able to identify them as Mississippi Kites (*Ictinia misisippiensis*). They were observed for about twenty minutes through 9x36 binoculars and a 15-60x telescope.

Three of the four kites were adults. The pale gray head and black tail were clearly visible. The fourth apparently was a juvenile with streaked underparts and a barred tail. When first observed they were fairly low. At times they would soar up high then suddenly drop down by side-slipping, feet first.

As we drove northward up the levee road, we were able to see two more kites soaring along the river bank. The weather was unseasonably cool and clear with the wind out of the southwest about 15 m.p.h. A cold front had passed through the week before.

As we went back through Tiptonville, we told Gene and Mary Lou Cypert where we had seen the kites. Later the same afternoon they observed two in the same area.

On the same day we also observed a Sharp-shinned Hawk (*Accipiter striatus*) near Walnut Log and a Broad-winged Hawk (*Buteo platypterus*) in the U. S. Fish and Wildlife Game Reserve at the north end of Reelfoot Lake.

Kenneth Leggett, RFD 1, Dyersburg 38024.

SWALLOW-TAILED KITE NEAR NASHVILLE—On 11 August 1968, a Swallow-tailed Kite (*Elanoides forficatus*) was observed at Donelson, Tenn., which is seven miles east of Nashville. The bird was leisurely passing over the suburbs of the town, about 200 feet up and soaring in circles while moving southward in a fairly direct line. The observers who watched this rare visitor from the south were Mrs. H. A. Hatcher and Mrs. Euclid Moore, both T.O.S. members who, with their husbands, were in the Moore yard at the time. They noted the white underparts, the black wings and tail and the deeply forked formation of the latter. They at once consulted their field guides and found the illustration that confirmed their earlier identification. Some days later they visited my collection of study skins and when I showed them the specimen that was accidentally killed near Winchester, Tenn., 12 August 1965, they readily recognized it as the species they had seen on 11 August. Reference to *The Migrant* 36:58 shows this to be the fourth Tennessee record in the last fifty years.

Albert F. Ganier, 2112 Woodlawn Dr., Nashville 37212.

NASHVILLE'S CONTRIBUTION TO THE CORNELL NEST-RECORD PROGRAM—During the 1967 nesting season the members of the Nashville Chapter continued their participation in the North American Nest-Record Card Program, sponsored by the Laboratory of Ornithology at Cornell University. The general area of Middle Tennessee produced cards (numbers in parenthesis) on the following species: Canada Goose (1), Bobwhite (1), Mourning Dove (2), Whip-poor-will (1) Pileated Woodpecker (1), Red-bellied Woodpecker (2), Red-headed Woodpecker (2), Downy Woodpecker (3), Eastern Kingbird (1), Barn Swallow (3), Cliff Swallow (1 card representing a nesting colony of 100 nests), Purple Martin (15 cards representing 80 nests, with one card used per nesting colony), Blue Jay (2), Common Crow (1), Carolina Chickadee (11), Tufted Titmouse (1), House Wren (2), Carolina Wren (1), Mockingbird (5), Catbird (3), Brown Thrasher (3), Robin (5), Eastern Bluebird (61), Blue-gray Gnatcatcher (2) Starling (9), Blue-winged Warbler, (1) Louisiana Waterthrush (1), House Sparrow (7), Red-winged Blackbird (1) Orchard Oriole (3), Common Grackle (4), Brown-headed Cowbird (2), Cardinal (7), Indigo Bunting (1), Rufous-sided Towhee (1), Chipping Sparrow (2). A total of 169 cards, representing 333 nests of 36 species, was turned in. There were fifteen participants in the program: Gary Allen, Mrs. William F. Bell, Mrs. Kathlein Bratton, Mrs. Erline Elmore, Mrs. Katherine Goodpasture, John Herbert, Mrs. Martha Herbert, Mrs. W. L. McCrary, Mrs. William McElroy, Mrs. Fanny Murphy, Henry Parmer, Mrs. W. L. Smith, Mrs. Evelyn Stone, L. O. Trabue, Mary Wood.

Of special interest is the report by Mrs. Fanny Murphy of a nest started by bluebirds and finished by chickadees, resulting in the hatching and raising of one bluebird and three chickadees by the chickadees (*The Migrant* 39:11). Martha and John Herbert have gone into the bluebird business in a big way at their farm in Cheatham County. Mrs. Amelia Laskey is participating with the Herberts in this project. This year's results are as follows: available nest boxes, 53; boxes used, 39; number of occupied nests, 48; eggs laid, 191;

eggs hatched, 116; nestlings fledged and banded, 91. This project will be continued and expanded.

Laurence Trabue, 3819 Harding Place, Nashville 37215.

NOTES ON SECOND ANNUAL INFORMAL SYMPOSIUM—Thirty-three persons gathered 26 October 1968, at Pete Smith's Watts Bar Resort for the Second Annual Fall Symposium. Mr. Fred Alsop III discussed Swainson's Warbler (*Limnothlypis swainsonii*) in Tennessee. Mr. Fred W. Behrend related experiences of twenty-five years of bird study on Roan Mountain. Mr. Albert Ganier talked of his experience over the years in searching for nesting Peregrine Falcons (*Falco peregrinus*). Mr. Charles Smith read a paper submitted by Mr. Mark B. Simpson of Statesville, N. C., relating his search for nesting Saw-whet Owls (*Aegolius acadica*) in the southern Appalachians. Mrs. Earl Olson gave her observations of nesting Tree Swallows (*Iridoprocne bicolor*) in East Tennessee. Mr. Mack Prichard, naturalist with State Parks Department, gave the evening program on conservation, wild areas, and pollution. It was decided the third annual symposium will be held at the same location. Mr. Kenneth H. Dubke presided at the meeting.

Frances Olson, Norris 37828.

COME TO UPPER EAST TENNESSEE
FOR THE FIFTY-FOURTH ANNUAL STATE T.O.S. MEETING 9, 10, 11 MAY 1969,

AT EAST TENNESSEE STATE UNIVERSITY, JOHNSON CITY, TENNESSEE

There will be a paper session on 10 May, at which papers describing original research in the area of ornithology may be presented. If you should wish to participate in this paper session, please send the title and a synopsis of your topic and an estimation of the time required for its presentation to the Editor as soon as possible.

TENNESSEE ORNITHOLOGICAL SOCIETY
TREASURER'S REPORT — MAY 1967 - MAY 1968

MEMBERSHIPS	PAID 1967	UNPAID 1968	PAID 1968	INDIVIDUAL	FAMILY	TAIN- SUS- ING	STUDENT	LIFE	COLLECTED
Bristol	33	4	31	15	15	1	—	—	$ 90.50
Chattanooga	27	9	29	16	8	—	3	2	96.50
U. Cumberland	22	5	21	17	4	—	—	—	54.50
Elizabethton	13		16	8	5	—	2	1	41.00
Greeneville	9	2	10	2	8	—	—	—	29.00
Kentucky Lake	7	7	1	1	—	—	—	—	3.00
Knoxville	73	4	82	36	25	2	15	4	221.50
Lebanon	18	—	23	13	9	—	—	1	65.00
Memphis	61	11	64	44	14	2	1	3	196.00
Nashville	134	29	139	71	42	9	6	11	438.00
Reelfoot	17	6	17	8	7	—	2	—	40.50
Tenn-at-Large	41	6	36	24	6	1	3	2	106.50
Corresponding	65	9	63	50	3	2	3	5	140.00
	520	92	532	305	146	17	35	29	$1522.00

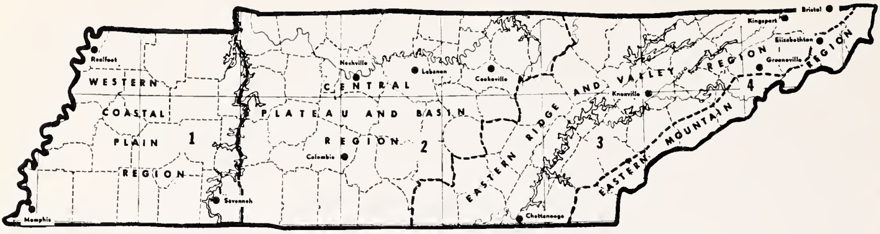
SUBSCRIPTIONS—Libraries and Museums		88.00
		$1610.00
OTHER INCOME		
M.I.T. Dividends	$145.87	
Shoulder Patches	38.75	
Check Lists and Books	71.05	
Back Issues THE MIGRANT	221.44	
Advertising THE MIGRANT	20.00	
Reprints	16.46	
		513.57
TOTAL INCOME FROM ALL SOURCES		$2123.57
DISBURSEMENTS		
Printing THE MIGRANT	$1665.35	
Secretarial Acct.—MIGRANT	100.00	
Mailing Permit, Postage, Envelopes	130.03	
Reprints of Articles	18.67	
Check Lists and Books	43.75	
Officers' Stationery, Postage	129.70	
Printing Constitution	18.50	
3 M.I.T. Shares (Life Memberships)	53.64	
TOTAL DISBURSED		$2159.64
Balance on Hand April 25, 1967	$1979.26	
Income as Itemized Above	2123.57	
	$4102.83	
Disbursements as Itemized Above	2159.64	
NET BALANCE ON HAND	$1943.19	
ENDOWMENT FUND—		
312 M.I.T. Certificates on Hand @$16.52		$5154.24

1 May 1968

ANNELLA CREECH, *Treasurer*

THE SEASON

Charles R. Smith, *Editor*


Reelfoot
WESTERN COASTAL PLAIN REGION
1
Memphis
Savannah
Nashville
Lebanon
Cookeville
Columbia
CENTRAL PLATEAU AND BASIN REGION
2
EASTERN RIDGE AND VALLEY REGION
3
Knoxville
Chattanooga
EASTERN MOUNTAIN REGION
4
Bristol
Kingsport
Elizabethton
Greeneville

Dry weather with cooler than average temperatures prevailed throughout August, September, and October across the state. August was the driest month with precipitation as much as 2.5 inches below the average for that month in some areas (e.g. Cumberland Plateau). September followed August with more dry weather and much cooler temperatures. The September temperature average for the Western Coastal Plain of Tennessee was 3.5 dgrees below the average for that month. October brought some relief from the dry weather, with precipitation levels returning to near normal for most of the state; however, the temperature still remained somewhat below average and traces of snow were reported from most parts of the state, except the Coastal Plain Region.

Probably the most significant record for this period is that of the Ground Dove from the Savannah area. This bird constituted a first record for the state. It is also interesting to note that the Cattle Egret may now be described as "routine" in the Reelfoot area, and that records of its occurrence are still increasing in number and spreading across the state.

Among the birds of prey, records of the Mississippi Kite from the Coastal Plain and especially the Swallow-tailed Kite from the Nashville area (see "Round Table Notes") are notable. Peregrine Falcons were also reported from the Plateau and Basin and Ridge and Valley Regions. Another record for the Saw-whet Owl was presented for the Nashville area. The Rough-legged Hawk was again recorded from the Ridge and Valley Region.

Other records of interest include Sandhill Cranes from both the Plateau and Basin and Ridge and Valley Regions. Records of the Sanderling and American Avocet are notable both for the state and for the Chattanooga area. The Least Tern was also unusual for the Chattanooga area.

Scattered reports of Purple Finches and Pine Siskins (the latter primarily from the Eastern regions) suggest that this winter might be another fair season for Northern finches, so keep your eyes and ears open.

Details of the above noted observations may be found in the reports which follow.

WESTERN COASTAL PLAIN REGION—*Herons-Osprey:* Great Blue Heron: 21 Sept. (13) LL. Cattle Egret: 25 Aug. (2) D, 6 Sept. (60) D, 21 Sept. (100) D (KL), 12 Oct. (13) R. Gadwall: 8 Sept. (3) R. Green-winged Teal: 15 Oct. (150) R. Blue-winged Teal: 2 Aug. (75) R. American Widgeon: 11 Sept. (3) R. Shoveler: 26 Sept. (75) R. Redhead: 25 Oct. (3) R. Ring-necked Duck: 16 Oct. (750) R. Canvasback: 29 Oct. (10) R. Ruddy Duck: 14 Oct. (150) R. Mississippi Kite: 18 Aug. (1) R, 2 Sept (6) R (KL). Sharp-shinned Hawk: 2 Sept. (1) R, 21 Sept. (1) LL, 12 Oct. (1) R. Cooper's Hawk: 18 Aug. (1) R, 2 Sept. (3) R, 21 Sept. (4) LL, 29 Sept. (1) R, 28 Oct. (1) H, all (KL). Broad-winged Hawk: 4 Oct. (11) LL. Bald Eagle: 28 Aug. (3) R (HSD). Marsh Hawk: 8 Sept. (1) R, 29 Sept. (2) R, 28 Oct. (1) H. Osprey: 12 Oct. (1) R.

Sandpipers-Kinglet: Pectoral Sandpiper: 2 Sept. (1) R. Least Sandpiper: 2 Sept. (1) R. Ground Dove: 20 Oct. (1) banded S; retrapped 7 Nov. (MP, DP). Great Horned Owl: all Sept. (1-3) S. Whip-poor-will: to 20 Sept. (1) S. Red-headed Woodpecker: 2 Sept. (48) R. Traill's Flycatcher: 8 Sept. (1) R (KL). Least Flycatcher: 4 Oct. (1) banded S. Tree Swallow: 2 Sept. (3,500 R, 12 Oct. (11,000) R. Bank Swallow: 2 Sept. (150) R. (KL). Rough-winged Swallow: 28 Aug. (2,000) R (HSD). Barn Swallow: 12 Oct. (54) R. Cliff Swallow: 12 Oct. (2) R. Purple Martin: 12 Oct. (3) R (MD). Fish Crow: 12 Oct. (1) R. Red-breasted Nuthatch: 12 Oct. (1) R, 28 Oct. (1) H. House Wren: 10 Oct. (1) first S record (DP). Wood Thrush: 12 Oct. (1) R, 21 Oct. (1) S. Hermit Thrush: 12 Oct. (5) R Golden-crowned Kinglet: 12 Oct. (5) R.

Vireos-Warblers: Solitary Vireo: 12 Oct. (1) R, 22 Oct. (1) S. Philadelphia Vireo: 29 Sept. (1) R, 4 Oct. (5) LL, 12 Oct. (3) R, (all KL). Tennessee Warbler: Oct. (98), 6 Nov. (1), 7 Nov. (1) banded, S. Orange-crowned Warbler: 12 Oct. (1) R, 5 Nov. (1) banded, S. Black-throated Green Warbler: to 22 Oct. (1) R. (EC). Blackburnian Warbler: 28 Sept. (2) R, to 10 Oct. (1) S. Palm Warbler: to 18 Oct. (2) S. Mourning Warbler: 12 Sept. (1) S. Wilson's Warbler: 29 Sept (1) R (KL).

Oriole-Sparrows: Baltimore Oriole: 8 Sept. (1) R (KL). Rusty Blackbird: 12 Oct. (1) R. Scarlet Tanager: 7 Oct. (1), 11 Oct. (1) S. Rose-breasted Grosbeak: 14 Sept. (1) R, 4 Oct. (200) LL (KL), 15, 16, 17 Oct. (1) banded each day, S. Blue Grosbeak: 8 Sept. (4) R (KL). Dickcissel: 5 Oct. (1) S. Vesper Sparrow: 12 Oct. (4) R. Slate-colored Junco: 4 Oct. (1) S. White-crowned Sparrow: 4, 10, 11 Oct. (1) banded each day, S. Lincoln's Sparrow: 2 Oct. (1), 14 Oct. (10) S.

Locations: D—Dyersburg area, H—Huntington, LL—Land-Between-the-Lakes, R—Reelfoot Lake and Tiptonville area, S—Savannah.

Observers: MD—Mary Davant, HSD—Helenhill S. Dove, KL—Kenneth Leggett, DP—David Patterson, MP—Mike Patterson.

David E. Patterson, Harbert Hills Academy, Olive Hill 37475.

CENTRAL PLATEAU AND BASIN REGION—*Grebes-Ducks:* Pied-billed Grebe: 1 Aug. (1) RL (MCW). Great Blue Heron: only two reports NA. Green Heron: last, 1 Oct. (1) RL (MCW). Little Blue Heron: 23 June

(5)SHV (MLB), 30 July (1) CL (MCW). Cattle Egret: a belated report, 29 May (4) PBP (MM), first NA record. Canada Geese: 5 Oct. (5) CV (RTH) and (SO) LA (MCW), 30 Oct. (100) CV (RTH). Blue Goose: 21 Oct. (1) RL (MCW). Mallard and Black Ducks: first report very late, 23 Oct. (2) each RL (LOT). Gadwall: only report, 1 Oct. (1) CV (RTH). Pintail: 23 Oct. (1) RL (LOT). Blue-winged Teal: 22 Sept. (20) NH (ECC). American Widgeon: 12 Oct. (12) CV (RTH), 29 Oct. (8) RL (MCW). Wood Duck: 1 July (70) down to (2) end of period RL (MCW); largest known number for NA. Ring-necked Duck: scarce with only two reports, 8 Oct. (1) RL (MCW) and 24 Oct. (6) BL (HEP).

Vultures-Cuckoos: Turkey Vulture: 27 Oct. (27) CV) (RTH). Swallow-tailed Kite: 11 Aug. (1) over DN (HAH, EM), third NA record. (see "Round Table" note, this issue). Broad-winged Hawk: 28 Sept (94) in one flight over JT (JR). Peregrine Falcon: 12 Sept. (1) perched WSM-TV (JP). Ruffed Grouse: 19 Oct. (1) FCF (AJ). Sandhill Crane: 21 Oct. approx. (10) BT (RH). American Coot: 1 Aug. (1) BL (HEP), 1 Sept. (1) to end of period (200) RL (MCW). Killdeer: seem to be very scarce NA (HEP). American Woodcock: 16 Oct. (1) CV (RTH). Spotted Sandpiper: 1 Aug. CL (MCW) to 23 Sept. (1) BL (HEP). Solitary Sandpiper: 30 July (5) CL (MCW) to 29 Sept. (3) CV (RTH). Least Sandpiper: 1 Aug. (1) CL (MCW), only report. Yellow-billed Cuckoo: 1 Oct. (1) RL (MCW). Black-billed Cuckoo: 28 Sept. (1) RL (MCW), 9 Oct. (1) CV (RTH).

Owls-Vireos: Saw-whet Owl: 28 Oct. (1) TJ (HEP), third NA record. Common Nighthawk: 5 Sept. migrating flight (250) RL (MCW). Chimney Swift: last, 22 Oct. (1) (HCM). Red-headed Woodpecker: several Oct. reports of immatures SHV. Yellow-bellied Sapsucker: 28 Sept. (2) FV (JOE). Eastern Kingbird: 7, 8, 10 Oct. (2) WB (HB). Yellow-bellied Flycatcher: 6 Sept. (1) banded BS (KAG). Least Flycatcher: 28 Aug. (1) banded BS (KAG). Eastern Wood Pewee: 11 Oct. (1) HEP). Olive-sided Flycatcher: 1 Sept. (1) SHV (KAG). Swallows: Bank (4), Barn (50), and Cliff (2), all 31 Aug. SHV (MLB). Purple Martin: last report, 14 Aug. (22) RR (SB). Red-breasted Nuthatch: 28 Sept. (1) BV (LOT, HEP), then several reports in Oct. House Wren: 24 Sept. (2) (FM). Winter Wren: 26 Oct. (1) (LOT). Catbird: last, 13 Oct. (1) RL (MCW). Swainson's Thrush: 6 Sept. (1) BS (MLB), to 29 Oct. (1) (CWF). Gray-cheeked Thrush: 15 Sept. (1) BS (KAG). Veery: first, 7 Sept. (1) BS (KAG). Ruby-crowned Kinglet: 17 Oct. (1) (FM). Cedar Waxwing: quite an invasion with several reports of large flocks in Oct. NA. Red-eyed Vireo: 24 Oct. (1), a casualty WSM-TV (ARL). Philadelphia Vireo: 16 Sept. (1) BS (KAG).

Warblers: Worm-eating: last report, 6 Sept. (1) BS (KAG). Golden-winged: 13 Sept. (1) (CWF). Blue-winged: 14 Oct. (1) RL (MCW), 10 days latest ever NA. Tennessee: 14 Sept. (1) BS (KAG), to 31 Oct. (1) (CWF). Nashville: 27 Sept. (1) BS (KAG). Magnolia: 4 Sept. (1) (MLB). Cape May: 6 Sept. (1) WSIX-TV, 25-26 Sept. (2) WSM-TV, both casualties (ARL), second and third fall records NA. Myrtle: 28 Sept. (2) RL (MCW) to (100 plus) there by end of period. Black-throated Green: 13 Sept. (1) BS (KAG) to 31 Oct. (1) (CWF). Blackburnian: 29 Sept: (1) BS (KAG) to 23 Oct. (1) RL (MCW). Yellow-throated: no reports after 14 July (1)

(MLB). Chestnut-sided: first, 14 Sept. (1) BS (KAG). Bay-breasted: from 15 Sept. (1) BS (KAG) to 22 Oct. (1) RL (MCW). Prairie: 13 Oct. (1) (LOT), 8 days latest ever and second Oct. record NA. Ovenbird: 25-26 Sept. well over (1800) killed WSM-TV tower! Northern Waterthrush: 25 Aug. (1) banded BS (KAG) to 12 Oct. (1) TJ (HEP). Yellowthroat: last, 16 Oct. (1) (MCW). Wilson's: first, 14 Sept. (1) BS (KAG).

Orioles-Sparrows: Orchard Oriole: 4 Sept. (1) (MLB), second Sept. NA record. Rusty Blackbird: 20 Oct. (2) (JOE) 7 days earliest for NA. Scarlet Tanager: 18 Oct. (1) BS (KAG). Summer Tanager: 12 Oct. (1) CV (RTH). Rose-breasted Grosbeak: 2 Sept. (1) TJ (MLB) 3 days earliest ever NA; then 5 Sept. (1) RL and (2) TJ (MLB). Blue Grosbeak. 1 Sept. (1) SHV, 5 Sept. (2) RL, both (MLB); 19 Sept. (5) RL (MCW), 4 days latest NA. Indigo Bunting: believed to be scarce NA (HEP). Purple Finch: a few late Oct. reports of small numbers NA. Vesper Sparrow: 26 Sept. (1) (HH) *fide* (ARL), 9 days earliest for fall NA; 3 Nov. (10) CT (AFG, LOT, HEP). Slate-colored Junco: late, with first report 20 Oct. (1) BS (KAG). White-crowned Sparrow: 11 Oct. (1), 12 Oct. (2) both (HH). White-throated Sparrow: 5 Oct. (2) (MCW), 10 Oct. (1) CV (RTH). Swamp Sparrow: 24 Sept. (2) (FM), 2 days earliest ever NA.

Locations: BL—Bush Lake, BS—Basin Springs, BT—Byrdstown, BV—Bellevue, CL—Coleman's Lake, CT—Centerville, CV—Cookeville, DN—Donelson, FCF—Falls Creek Falls Park, FV—Fernvale, LA—Lake Anne, Woodbury, NA—Nashville Area, NH—Narrows of the Harpeth River, PBP—Pennington Bend Pond area, RL—Radnor Lake, RR—River Road, Nashville, SHV—South Harpeth Valley, TJ—Two Jays Sanctuary, WB—Woodbury, WSIX-TV—949 ft. tower, WSM-TV—1369 ft. tower.

Observers: HB—Mr. and Mrs. Hoyt Bryson, MLB—Mike Bierly, SB—Sue Bell, ECC—Elizabeth Collins, JOE—John O. Ellis, CWF—Clara Fentress, AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, HAH—Mr. and Mrs. H. A. Hatcher, RTH—Roy T. Hinds, HH—Helen Hodgson, RH—Robbie Hassler, AJ—Amy Johnson, ARL—Amelia R. Laskey, MM—Margaret Mann, HCM—Harry C. Monk, EM—Mr. and Mrs. Euclid Moore, FM—Fanny Murphy, HEP—Henry E. Parmer, JP—Jimmy Parrish, JR—Jennie Riggs, LOT—Lawrence O. Trabue, MCW—Mary C. Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION—*Loons-Geese:* Common Loon: 25 Oct. (7) BL (WC), 29 Oct. (1) BWP (KD), 30 Oct. (2) NL (JCH). Horned Grebe: 23 Oct. (1) SHL (WC, JW). Pied-billed Grebe: regular through period, Chattanooga, max. 22 Oct. (23) TRG (KD), first in Bristol area 11 Sept. (1) SHL (WC, RB), first in Johnson City area 17 Sept. (1) BL (CRS). Double-crested Cormorant: 27 Oct. (2) HRA (JTT). Great Blue Heron: scattered reports of small numbers through area and period. Green Heron: regular in all areas until Sept., last in Johnson City area 29 Sept. (1) BL (HD), in Chattanooga 13 Oct. (2) SB (JD). Little Blue Heron: 5 Aug. (15), 17 Sept. (1) HRA (KD). Cattle Egret: 2 Sept. (1) HRA (KD). Black-crowned Night Heron: 25 Aug. (2) M (TK). Yellow-crowned Night Heron: 5 Aug. (1) HRA (KD). Least Bittern: 26 Aug. (1) K (BL). American Bittern: 15 Oct. (1), 27 Oct. (1) HRA (KD). Ibis (species): 18 Sept. (1) SB (KD) (Since this bird could conceivably have been a White-Faced Ibis rather than the more likely Glossy Ibis, the observer did not claim a positive identification). Canada Goose: first, 13 Sept. (40) CL (FO), max. 27 Oct. (2,500) HRA (KOS, COS). Blue Goose: through period (1) K (JE), present for over a year and presumably injured, 15 Oct. (3) 29 Oct. (15) HRA (KD).

Ducks-Vultures: Mallard: firsts, 29 Sept. (1) K (KOS), 18 Oct. (9) PHL (CRS), 23 Oct. (4) SHL (WC, JW), 27 Oct. (50) HRA (KOS, COS). Black Duck: 22 Sept. (2) MHL (FA, JA, JMC, RME), 24 Sept. (1) HRA (KD), 23 Oct. (57) SHL (WC), JW), 27 Oct. (80) HRA (KOS, COS). Gadwall: firsts, 7 Oct. (6) HRA (KD), 25 Oct. (3) PHL (WC, DGD). Pintail: firsts, 10 Oct. (1) HRA (KD), 11 Oct. (1) SHL (WC, JW). Blue-winged Teal: firsts, 16 Aug. (4) SB (KD), 18 Aug. (15) K (BL), 2 Sept. (3) SHL (WC, DM). American Widgeon: first, 30 Sept. (7) HRA (KD), max. 23 Oct. (142) SHL (WC, JW). Wood Duck: through period and area, max. 17 Sept. (375) HRA (KD). Ring-necked Duck: 28 Aug. (1) CL (FO), 8 Oct. (1) TRG (KD), 25 Oct. (5) BL (WC, DGD). Lesser Scaup: 21 Oct. (3) ChL (KD), 23 Oct. (86) SHL (WC, JW), 25 Oct. (5) BL (WC, DGD). Common Goldeneye: 27 Oct. (17) BWP (JD). Bufflehead: regular to 12 Aug. (1) HRA (KD), 26 Oct. (2) HRA (KD). Ruddy Duck: 23 Oct. (1) SHL (WC, JW), 31 Oct. (3) SHL (WC, DM). Hooded Merganser: 26 Oct. (1) HCP (JD). Turkey Vulture: 21 Sept. (11) G (RH), 29 Sept. (1) K (KOS). Black Vulture: 21 Sept. (7) G (RH), 25 Oct. (5 SHL (WC, DGD).

Hawks-Plovers: Sharp-shinned Hawk: 29 Sept. (1) K (JMC, RME, JBO), 5 Oct. (2) K (FA, JMC, GW), 25 Oct. (1) SHL (WC, DGD). Cooper's Hawk: 29 Aug. (1) G (RN), 29 Sept. (1) G (RH), 19 Oct. (1) G (WC). Red-tailed Hawk: very small numbers in scattered areas of region. Broad-winged Hawk: to be reported in annual hawk count in *The Migrant*. Rough-legged Hawk: 27 Oct. (1) D (JD, FO). Bald Eagle: 16 Aug., 25 Aug. (1) NL (JCH). Marsh Hawk: first, 24 Sept. and through period (1) HRA (KD); 29 Sept. (1) K (KOS). Osprey: 29 Sept. (1) NR (LRH, DB), 29 Sept. (3) FLL (JMC), 11 Oct. (2) SHL (WC, JW), 17 Oct. (1) B (WC), 25 Oct. (1) SHL (WC, DGD); regular through period (1) HRA (WiC *fide* KD). Peregrine Falcon: 30 Oct. (1) SHL (WC, DGD). Ruffed Grouse: 22 Sept. (1) G (RN). Ring-necked Pheasant: present through period at HRA, max. 30 Sept. (6) (KD). Sandhill Crane: 21 Oct. (3) SB (KD), 23 Oct. (41) Ma (BW, IW). Sora: 9 Sept. (1) G (RN), 17 Sept. (1) AS (WC, CRS), 29 Sept. (1) K (HO). American Coot: firsts, 24 Sept. (100) HCP (GWW *fide* KD), 29 Sept. (1) K (HO), 11 Oct. (29) SHL (WC, JW), 28 Oct. (201) BL (HD, GD), max, 23 Oct. (668) SHL (WC, JW). Semipalmated Plover: 2 Sept. (1) SHL (WC, DM), 16 Sept. (1) SHL (WC), 6 Aug. (1) HRA (KD). American Golden Plover: 27 Oct. (1) HRA (FA, BW, IW). Black-bellied Plover: 7 Sept. (1) CkL (TK), 20 Oct. (1) HRA (BB, ML, RS).

Woodcock-Terns: American Woodcock: 17 Sept. (1) AS (WC, CRS), 29 Sept. (1) K (KOS). Common Snipe: firsts, 18 Sept. (1) SB (KD), 29 Sept. (2) K (JMC, RME). Spotted Sandpiper: present from start of period in most areas; last dates, 2 Oct. (1) SB (KD), 7 Oct. (2) SHL (WC, DGD). Solitary Sandpiper: 5 Aug. (1) SHL (WC), 10 Aug. (1) M (TK), 26 Aug. (1) K (BL), 29 Sept. (1) K (JMC, RME). Greater Yellowlegs: (1 to 5) present at HRA until 29 Oct. (KD), 2 Sept. (3) SHL (WC, DM), 9 Sept. (1) AS (CRS), 29 Sept. (1) K (KOS). Lesser Yellowlegs: 10 Aug. (1) M (TK), 16 Aug. (8) HRA (ID), 9 Sept. and 15 Sept. (1) and (2) AS (CRS), 21 Sept. (1) G (RH), 29 Sept. (1) K (KOS). Pectoral Sandpiper: through period at HRA, max. 6 Aug. (75) (KD), others, 4 Aug. (1) M (TK), 9 Sept. (5) AS (CRS), 21 Sept. (3) G (RH), 29 Sept. (1) K (KOS). Least Sandpiper: 4 Aug. (1) M (TK), 5 Aug. (1) SHL (WC), 21 Sept. (3) CkL (RH), 30 Sept. (60) HRA (KD), 7 Oct. (2) SHL (WC, DGD). Dunlin: 7 Oct. (1) SHL (WC, DGD), 13 Oct. (2) SB (JD). Semipalmated Sandpiper: 5 Aug. (1) HRA (KD), 5 Aug. (1) SHL (WC), 26 Aug. (3) HRA (KD), 2 Sept. (2) SHL (WC, DM), 21 and 28 Sept. (2 and 1) CkL (RH). Sanderling: 2 Sept. (2) HRA (KD). American Avocet: 29 Oct. (1) HRA (KD), 30 Oct. (1) HRA (BB, ML, RS) (This bird was the first local record). Herring Gull: 29 Oct. (4) SHL (WC, DM). Ring-billed Gull: 23 Oct. (3) SHL (WC, JW), 26 Oct. (3) HRA (KD), 28 Oct. (4) BL (CRS). Bonaparte's Gull: 20 Oct. (8) NL (JCH). Forster's Tern: 2 Sept. (20) HRA (KD), 29 Sept. (1) K (JTT). Common Tern: 2 Sept. (30) SHL (WC, DM), 2 Sept. (40) HRA (JD, KD). Least Tern: 25, 26 Aug. (1) SB (KD). Caspian Tern: 2 Sept. (1) HRA (JD). Black Tern: 14 Aug. (17) SB (KD), 2 Sept. (2) HRA (KD).

Cuckoos-Swallows: Yellow-billed Cuckoo: last records, 11 Sept. (1) SHL (WC, RB) 29 Sept. (15) K (KOS), 2 Oct. (1) PP (KD). Black-billed Cuckoo: 21 Sept. (1) G (RH). Barn Owl: through period (1-2) AM (KD), through period (1-2) JC, 16 Oct. (1) G (RN), 20 Oct. (1) NL (JCH). Great Horned Owl: 7 Sept. and 12 Oct. (1) NL (JCH), 29 Sept. (4) K (KOS). Barred Owl: (1-2) on the following dates: 16 Aug., 7, 11, 14, 21 Sept., 12, 13, 20 Oct. NL (JCH). Chuck-will's widow: last records, 12 Aug. (1) SB (KD), 19 Aug. (1) G (RN). Whip-poor-will: last records, 7 Aug. (1) JC (DB), 23 Aug. (1) HRA (KD). Common Nighthawk: 2 Sept. (400) B (WC), 2 Sept. (1000) G (RSp); last, 20 Sept. (20) G (RH), 25 Sept. (2) SB (KD). Chimney Swift: last records, 7 Oct. (4) SHL (WC, DGD), 14 Oct. (3) Col. (ML). Ruby-throated Hummingbird: last records, 22 Sept. (1) JC (CRS), 29 Sept. (1) K (KOS), 1 Oct. (1) Col (ML). Yellow-bellied Sapsucker: firsts, 25 Sept. (1) HB (RS), 29 Sept. (12) K (KOS), 30 Sept. (2) SHL (WC, DGD). Eastern Kingbird: last records, 9 Sept. (5) SHL (WC, DGD), 9 Sept. (15) (KD), 17 Sept. (4) AS (WC, CRS), 29 Sept. (1) K (FA, JCH). Great Crested Flycatcher: last records, 9 Sept. (1) SHL (WC), 17 Sept. (1) HRA (KD), 29 Sept. (35) K (KOS). Eastern Wood Pewee: last records 5 Oct. (2) SHL (WC, CO), 13 Oct. (1) N (FO). Olive-sided Flycatcher: 21 Sept. (1) Col (ML). Tree Swallow: 11 Aug. (2) NR (TK), 20 Aug. (2) HRA (KD), 17 Sept. (10) HRA (KD), 7 Oct. (3) SHL (WC, DGD). Bank Swallow: 4, 11, 25 Aug. (200, 25, 100) NR (JK), 2 Sept. (15) HRA (JD), 8 Sept. (1) SM (JD), 24 Sept. (1) HRA (KD). Cliff Swallow: 11, 30 Aug. (3, 50) NR (TK).

Martin-Vireos: Purple Martin: large concentration from 26 July through 15 Sept., peak of (approx. 10,000) 26 Aug. OR (BW, JM, CMW), last Chattanooga area, 17 Sept. (1) HRA (KD). Red-breasted Nuthatch: first, 25 Aug.

(2) C (JD), 7 Sept. (12) K (JE), 29 Oct. (2) SHL (WC, DM) (Regular in most areas since). Brown Creeper: first, 29 Sept. (3) K (KOS), 23 Oct. (1) B (DGD), 25 Oct. (1) JC (HD, GD), regular since. House Wren: 29 Sept. (1) K (KOS), 5 Oct. (1) K (JMC), 18 Oct. (1) Col. (ML). Winter Wren: firsts, 21 Sept. (2) Col (ML), 30 Sept. (1) K (MS), 22 Oct. (1) B (DGD). Long-billed Marsh Wren: 27 Oct. (1) HRA (BB, RHu). Short-billed Marsh Wren: 12 Aug. (1) G (RN), 29 Sept. (1) K (JMC). Catbird: last records, 1 Oct. (1) Col (ML), 7 Oct. (3) SHL (WC, DGD), 20 Oct. (1) N (FO). Wood Thrush: last records, 12 Oct. (1) N (FO), 20 Oct. (1) PP (KD). Hermit Thrush: firsts, 14 Oct. (1) K (MS), 22 Oct. (2) BC (DGD). Swainson's Thrush: firsts, 7 Sept. (1) JC (WAB), 18 Sept. (4) SHL (WC), 21 Sept. (3) Col (ML); last records, 6 Oct. (1) SHL (WC), 8 Oct. (1) Col (ML), 27 Oct. (1) K (MS). Gray-cheeked Thrush: 29 Sept. (5) K (KOS), 17 Oct. (1) JC (WAB). Blue-gray Gnatcatcher: last 15 Sept. (1) N (FO), 25 Sept. (1) PP (KD). Golden-crowned Kinglet: firsts, 20 Oct. (1) K (MS), 21 Oct. (1) BWP (KD), 23 Oct. (25) B (DGD). Ruby-crowned Kinglet: firsts, 21 Sept. (1) Col (ML), 29 Sept. (31) K (KOS), 6 Oct. (1) SHL (WC). White-eyed Vireo: last records, 25 Sept. (1) Col (ML), 29 Sept. (15) K (KOS). Yellow-throated Vireo: Last records, 28 Sept. (1) PP (KD), 5 Oct. (3) K (JMC, RME). Solitary Vireo: 21 Sept. (1) Col (RS), 29 Sept. (2) K (JMC), 5 Oct. (2) K (FA, JMC, RME), 23 and 26 Oct. (1) K (MS). Red-eyed Vireo: last records, 28 Sept. (1) PP (KD), 29 Sept. (8) K (KOS). Philadelphia Vireo: 29 Sept. (2) K (JMC, RME, JBO).

Warblers: Black-and-white: last records, 29 Sept. (8) (KOS), 8 Oct. (1) Col (ML). Prothonotary: 6 Sept. (1) K (MS). Golden-winged: last, 19 Sept. (1) C (KD). Blue-winged: 28 Aug. (1) K (MS), 15 Sept. (2) Col (ML). Brewster's: 21 Oct. (1) K (MS). Tennessee: 8 Sept. through 9 Oct. (1 to 6) E (DB, LRH), 29 Sept. (118) K (KOS). Nashville: 29 Sept. (4) K (KOS). Parula: 14 Sept. (1) G (RH), 29 Sept. (1) K (KOS). Magnolia: firsts, 5 Sept. (1) B (DM), 5 Sept. (1) Col (RS), max. 29 Sept. (106) K (KOS), last, 14 Oct. (5) Col (ML). Cape May: 29 Sept. (2) K (KOS), 5 Oct. (4) K (JMC), 12 Oct. (1) N (FO). Black-throated Blue: 21 Sept. (1) Col (ML), 29 Sept, (1) K (KOS). Myrtle: firsts, 14 Sept. (1) G (RN), 15 Sept. (1) Col (ML), 27 Sept. (1) B (DM). Cerulean: 15 Aug. (1) N (FO). Black-throated Green: first, 8 Sept. (1) K (MS), max. 29 Sept. (23) K (KOS); last, 20 Oct. (1) K (MS). Blackburnian: firsts, 12 Sept. (1) K (MS), 19 Sept. (2) C (KD), last, 29 Sept. (10) (KOS). Yellow-throated: 21 Sept. (2) Col (ML), 29 Sept. (2) K (KOS), 12 Oct. (1) N (FO). Chestnut-sided: first, 26 Aug. (1) K (MS), 11 Sept. (1) BC (DM), max. 29 Sept. (25) K (KOS), last 13 Oct. (1) N (FO). Bay-breasted: first, 10 Sept. (1) K (MS), max., 29 Sept. (37) K (KOS), last, 14 Oct. (30) Col (ML). Pine: 29 Sept. (5) K (KOS), 5, 12 Oct. (1) N (FO). Prairie: last, 19 Oct. (1) K (MS). Palm: 29 Sept. (21) K (KOS); last records, 9 Oct. (1) E (HD), 14 Oct. (1) G (RN). Ovenbird: last, 8 Oct. (1) K (MS). Northern Waterthrush: 25-28 Sept. (7 banded) Col (ML). Kentucky: last, 21 Sept. (1) Col (ML). Connecticut: 9 Oct. (1) E (HD). Yellowthroat: last records, 7 Oct. (1) SHL (WC, DGD), 14 Oct. (2) Col (ML). Yellow-breasted Chat: last records, 21 Sept. (1) Col (RS), 29 Sept. (2) K (KOS). Hooded: last records, 8 Oct. (1) Col. (ML), 13 Oct. (1) K (MS). Wilson's: 15 Sept. (1) N (FO), 20, 21 25 Sept. (1, 1, 6) Col (ML, RS), 4 Oct. (1) K (HO), 12 Oct. (1)

N (FO). Canada: 17 Aug. (1) K (MS), 21 Sept. (1) Col (ML). Redstart: last records, 19 Sept. (1) C (KD), 26 Sept. (1) B (DM), 29 Sept. (39) K (KOS), 9 Oct. (1) E (HD).

Bobolink-Sparrows: Bobolink: 2 Sept. (12) G (RN), 29 Sept. (1) K (KOS). Orchard Oriole: last, 28 Aug. (1) SB (JWa). Baltimore Oriole: 19 Sept. (1) C (KD), 21 Sept. (1) B (DM). Rusty Blackbird: 27 Oct. (1) Col (RS). Scarlet Tanager: 14 Sept. (2) N (FO), 29 Sept. (5) K (KOS), last 14 Oct. (1) N (FO). Summer Tanager: last records, 13 Oct. (1) N (FO), 19 Oct. (1) K (MS), 20 Oct. (1) PP (KD). Rose-breasted Grosbeak: first, 17 Sept. (1) HRA (KD); max., 29 Sept. (105) K (KOS); last, 24 Oct. (1) K (MS). Blue Grosbeak: 26 Aug. (1 singing) K (BL); last, 29 Sept. (4) K (KOS). Indigo Bunting: last 13 Oct. (1) C (RTB). Purple Finch: firsts, 19 Oct. (1) K (NC), 21 Oct. (1) SB (KD), 23 Oct. (1) N (FO), 25 Oct. (14) SHL (WC, DGD). Pine Siskin: 18 Sept. (2) Col (RS). Savannah Sparrow: firsts, 15 Sept. (1) AS (CRS), 16 Sept. (1) SHL (WC), 21 Sept. (6) G (RH), 29 Sept. (23) K (KOS), 20 Oct. (1) SB (KD). Grasshopper Sparrow: 25 Aug. (1) SB (KD). Vesper Sparrow: 21 Sept. (5) Col (ML), 31 Oct. (1) SHL (WC, DM). Slate-colored Junco: firsts, 22 Oct. (1) TRG (KD), 23 Oct. (7) SHL (WC, JW), 24 Oct. (1) K (MS), 24 Oct. (1) E (HD). Chipping Sparrows: last records, 6 Oct. (1) SHL (WC), 20 Oct. (12) K (JMC, FA, GW). White-crowned Sparrow: firsts, 15 Oct. (2) G (ED), 25 Oct. (1) SHL (WC, DGD), 26 Oct. (1) Col (ML). White-throated Sparrow: first, 30 Sept. (1) K (MS). Fox Sparrow: first, 27 Oct. (2) HRA (BB, RHu). Lincoln's Sparrow: 7 Oct. (3) SHL (WC, DGD). Swamp Sparrow: first, 2 Oct. (1) SB (KD).

Locations: AS—Austin Springs, B—Bristol, BWP—Booker T. Washington State Park, BL—Boone Lake, C—Chattanooga, CkL—Cherokee Lake, ChL—Chickamauga Lake, Col—Collegedale, CL—Cove Lake, D—Decatur, E—Elizabethton, FLL—Fort Loudon Lake, G—Greeneville, HCP—Hamilton County Park, H—Harrison Bay, HRA—Hiwassee River Area, JC—Johnson City, K—Knoxville, Ma—Maryville, MHL—Melton Hill Lake, M—Morristown, NR—Nolichucky River, N—Norris, NL—Norris Lake, OR—Oak Ridge, PHL—Patrick Henry Lake, PP—Point Park, SB—Savannah Bay, SM—Signal Mountain, SHL—South Holston Lake, TRG—Tenn. River Gorge.

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EASTERN MOUNTAIN REGION—*Heron-Nuthatches:* Green Heron: 3-4 Aug. (2) CC (FA). Canada Goose: 31 Oct. (20) MC (LRH). Lesser Scaup: one male and female throughout period WiL (CRS). Sharp-shinned Hawk: 4 Aug. (1) RM, 7 Sept. (1) HM (CRS). Turkey Vulture: 8 Aug. (1) HW 70 (RH); 25 Aug. (1) CC (JMC). Cooper's Hawk: 16 Aug. (1) GY (FA); 7 Sept. (1) HM (CRS). Red-tailed Hawk: 7 Sept. (4) HM (CRS); 8 Aug. (1) TF (FA); 21 Aug. (1) HW 70 (RH). Marsh Hawk: 7 Sept. (1) HM (CRS). Osprey: 19 Sept. (3) WL (CRS). Ruffed Grouse: 1-2 through period, E (CRS). Sandhill Crane: 23 Oct. (27) CO, first record for GSMNP(HO). Pectoral Sandpiper: 19 Sept. (2) RC (CRS). Semipalmated Sandpiper: 19 Sept. (2) RC (CRS). Common Nighthawk: flight of (206) over MC 2 Sept. (CRS). Chimney Swift: last 8 Oct. (200) MC (CRS). Red-bellied Woodpecker: 3 Aug. (1) CC (FA). Yellow-bellied Sapsucker: first 7 Oct. MC (CRS). Acadian Flycatcher: 8 Sept. (1) SV (KD, CRS). Cliff Swallow: 27 Aug. (9) HM (CRS). Purple Martin: last 10 Aug. (3) E (LRH, LH). Common Raven: 1-3 throughout period on RM (FB). White-breasted Nuthatch: 25 Aug. (1) CC (JMC). Red-breasted Nuthatch: numbers increasing on RM with (20) on 20 Oct. and (60) on 22 Oct. (FB).

Kinglets-Sparrows: Golden-crowned Kinglet: at lower elevations 22 Oct. E (FB). Ruby-crowned Kinglet: first 29 Sept. (1) E (FB). Tennessee Warbler: 8 Sept.-9 Oct. (1-6) E (CRS); 5 Oct. (1) HCA (RH). Nashville Warbler: 28 Aug. (1) MC (LH); 16 Sept. (1) banded at MC (CRS). Magnolia Warbler: 5 Oct. (1) HCA (RH). Cape May Warbler: 7 Sept. (4), 29 Sept. (1) EGC. (LH). Yellow-throated Warbler: 28 Aug. (1), 4-15 Sept. (1) EGC (LH). Pine Warbler: 26 Sept. (25) MC (HD, GD). Prairie Warbler: 5 Oct. (1) HCA (RH); last 7 Oct. (10) EGC (LH). Palm Warbler: 14-23 Sept. (2) EGC (LRH, LH). Louisiana Waterthrush: last 8 Sept. (1) SV (KD, CRS). Connecticut Warbler: 7 Oct. (1) EGC (LH). Mourning Warbler: (1) banded at MC 12 Sept. (CRS). Wilson's Warbler: 11-12 Sept. (one each date) banded at MC (CRS). Northern Waterthrush: only record 29 Sept. (1) MC (CRS). Bobolink: 29 Sept. (1) MC (CRS). Orchard Oriole: last 4 Sept. EGC (LH). Baltimore Oriole: last 4 Sept. (2) EGC (LH); 25 Aug. (1) CC (JMC). Pine Siskin: first 20 Oct. (12) RM (FB). White-crowned Sparrow: first 30 Sept. (1) EGC (LH). Lincoln's Sparrow: 29 Sept. (1) MC (CRS).

Locations: CC—Cades Cove Great Smoky Mountain National Park, CO—Cherokee Blouvard Great Smoky Mountain National Park, EGC—Elizabethton Golf Course, E—Elizabethton, GY—Gypville, HCA—Houston Creek Recreation Area, HM—Hump Mountain; HW—Highway 70, MC—Milligan College, RC—Roan Creek; RM—Roan Mountain, SH—Shady Valley, TF—Tremont Forks Great Smoky Mountain National Park, WL—Watauga Lake, WiL—Wilbur Lake.

Observers: FA—Fred Alsop, FB—Fred W. Behrend, JMC—James M. Campbell, HD—Mrs. Harold Dillenbeck, GD—Mrs. George Dove, KD—Ken Dubke, LH—Mrs. Lois Herndon, LRH—Lee R. Herndon, RH—Robert Holt, HO—Mrs. Holly Overton, CRS—Charles R. Smith.

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EVALUATING THE CHRISTMAS COUNT RECORDS OF BOBWHITE IN TENNESSEE

By James T. Tanner and Ries S. Collier

Christmas bird counts made in Tennessee have been reported in *The Migrant* since 1930. Counts were made that year in Knoxville, Nashville, and Memphis. Since then the number of areas has increased to represent most regions of the state. The Christmas counts have become one of the Tennessee Ornithological Society's major activities, a cooperative project in which the many participants have learned much about birds and while doing so have had a lot of sport. Much information about the birds of Tennessee has accumulated; for example, rare and unusual species have been found, and the fluctuations in the abundance of winter finches have been revealed by the recorded numbers.

The wealth of data in these bird counts has stimulated attempts to use the records for measuring changes in the abundance of other birds, particularly of a species like the Bobwhite (*Colinus virginianus*) in which people are especially interested. This proved to be very difficult because of the many factors affecting the number of individual birds observed and reported. Some of these factors are: numbers of observers, parties, party-hours, and party-miles; ability and accuracy of the observers; coverage of different habitats; weather. To allow for all of these in interpreting or evaluating the counts would be a very complex process. The single factor probably having the most effect on the numbers of individual birds observed is the number of party-hours spent in the field. This, however, along with the other factors, was not reported in the earlier counts and is frequently missing from some of the recent ones.

Looking for a way out of the complexities described above led to the idea of using an "index bird," a species whose observed numbers could be used as a base against which the numbers of other species would be compared. The ideal "index bird" would be easily identified, common and widespread, well dispersed and not aggregating into large flocks, and stable in numbers from year to year. If a species met all these conditions, its numbers observed on a Christmas count would be a good measure of the number of parties and the time they spent in the field, of their ability and effort in finding birds, and of the suitability of the weather for birding—all combined in one number.

The possibility of using an "index bird" to measure the abundance of Bobwhites was investigated by Ries S. Collier at The University of Tennessee and was the subject of his Master of Science thesis (Collier, 1967). He obtained the data from the Christmas count records published in *The Migrant,* and he performed all the calculations and tests described below.

SMITHSONIAN MAY 6 [illegible]
INSTITUTION

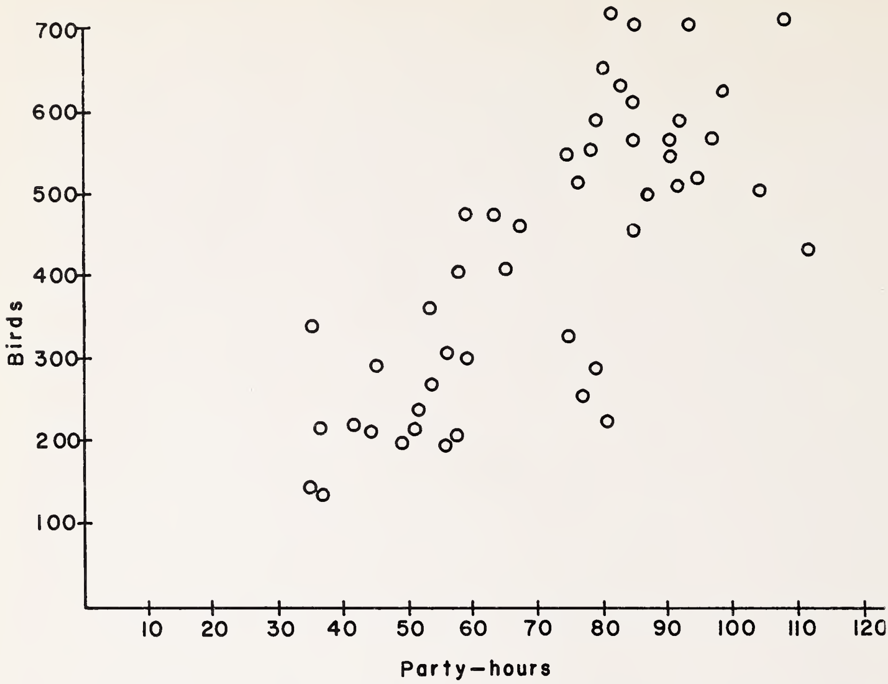


Figure 1. Number of Cardinals observed per party-hours on 49 Christmas counts in Tennessee.

Three species seemed obvious possibilities for an index because they are common birds in the habitats of Bobwhites in Tennessee; these were the Tufted Titmouse (*Parus bicolor*), Mockingbird (*Mimus polyglottos*) and Cardinal (*Richmondena cardinalis*). Graphs were prepared showing the number reported of each of these species plotted against the party-hours in the field for 26 years of Christmas counts at Memphis and 23 at Nashville. The data for the Cardinal showed the best relation in that the average number of Cardinals increased linearly with the number of party-hours at the rate of approximately 6 Cardinals per party-hour (Figure 1). The plots for the other two species showed more scatter and a much slower rate, about 1.6 birds per party-hour. So the Cardinal was chosen as the "index bird."

Two methods of assessing the abundance of Bobwhites were then compared, one being the Bobwhite per party-hour ratio and the other being the Bobwhite per Cardinal ratio.

One objective of this study was to find a way in which the abundance of Bobwhites in one area could be compared with another, or at one time with another. To make comparisons by the usual and most efficient statistical methods, it is necessary that the data be "normally distributed", i.e., that a plot of the data be bell-shaped with most points clustered symmetrically around the average value and few at either extreme. The second step in the study was to test both the Bobwhite per party-hour and the Bobwhite per Cardinal ratios, and some simple mathematical transformations of these, to see which had the most normal distribution. The only transformations tried were the logarithms of the ratios and the square roots of the ratios, and neither of these improved the distribution. The Bobwhite per Cardinal ratio proved to be slightly better than the Bobwhite per party-hour ratio. The first had another advantage in that all Christmas counts recorded in *The Migrant* could be used, since Cardinals were seen every time, while in many cases the party-hours had not been recorded. In short, Bobwhites per Cardinal gave a slightly better test and much more data than did Bobwhites per party-hour. The remainder of this paper discusses the Bobwhite-Cardinal ratio; to simplify the figures, the ratio will be expressed as the number of Bobwhites per 100 Cardinals.

The average ratios for the three geographical regions of the state are shown in Table 1. These were calculated from the totals of all Bobwhites and Cardinals reported each year from each region. Also included in the table is the data from the one area in each region having the longest usable record. The last column of the table, the standard deviation, shows the great variation that has occurred over the years in each area. Considering the variation, there are no significant differences between the ratios of the different regions or localities. The high ratio for East Tennessee might look as though Bobwhites were relatively more common there, but as is indicated in the footnote of the table, elimination of four extremely high counts from the East Tennessee record reduces the average to 13, in line with all the others. Incidentally, the Bobwhite per party-hour ratio had standard deviations that relatively were as large as the Bobwhite per Cardinal ratio.

A method of presenting the year to year changes in each region was adopted, a method that is used in quality control in industry and is described by Tippett (1950). Figure 2 illustrates this method with the Bobwhite-Cardinal ratios from West Tennessee. The values are simply plotted in sequence, with one horizontal line showing the mean value and two horizontal lines labeled with a certain probability (1% in Figure 2). The method of calculating the location of these two lines is described in Tippett (1950), but their meaning essentially is this: based on the mean and standard deviation of the ratios, the

TABLE 1
MEANS AND STANDARD DEVIATIONS FOR BOBWHITES/100 CARDINALS

Locations and Areas	Mean	Standard Deviation
West Tennessee	15	8.8
Memphis	17	8.6
Middle Tennessee	12	6.1
Nashville	11	10.6
East Tennessee	39*	40.8
Greeneville	13	12.3

*If the four highest ratios are eliminated from the East Tennessee record, the mean is reduced to 13, and the standard deviation would be correspondingly reduced.

chances of a point falling outside these lines is 1% or less. If a point does fall outside, the chances of its being an accident are very small and there probably is a significant cause for the high or low value.

A technical but important point should be mentioned here for those interested in statistical tests of field data: the standard deviation was calculated by the method described in Tippett (1950), by the difference between successive points, a method which reduces the effect of trends or slow changes.

Examination of Figure 2 will reveal an anomaly, in that the lower 1% line is drawn below the zero line, at an impossible figure of fewer than no Bobwhites at all. This results from the fact that the variation in the data is so great that the standard deviation is large compared with the mean (see Table 1). There is, therefore, no way to recognize significantly small numbers of Bobwhites.

Charts similar to Figure 2 were prepared for each region and locality shown in Table 1, with the objective of seeing if there were any trends in Bobwhite populations or any years in which Bobwhites were unusually abundant. The results were disappointing in that few of these became apparent. The values varied greatly from year to year, as is shown for West Tennessee, almost as if they had been determined by chance. The reasons for this up and down variation are probably three-fold. First, Bobwhite populations really are variable. Second, the Cardinal is probably the best choice for an "index bird," but its numbers must also fluctuate from year to year and we have no good way of measuring this. Third, Christmas count records are influenced by many factors, some having been stated earlier, but another which is impossible to evaluate is the care and accuracy with which the observers make and record their counts. The method of using an "index bird" did prove to be slightly better than using party-hours, but was not as useful as we had hoped it would be.

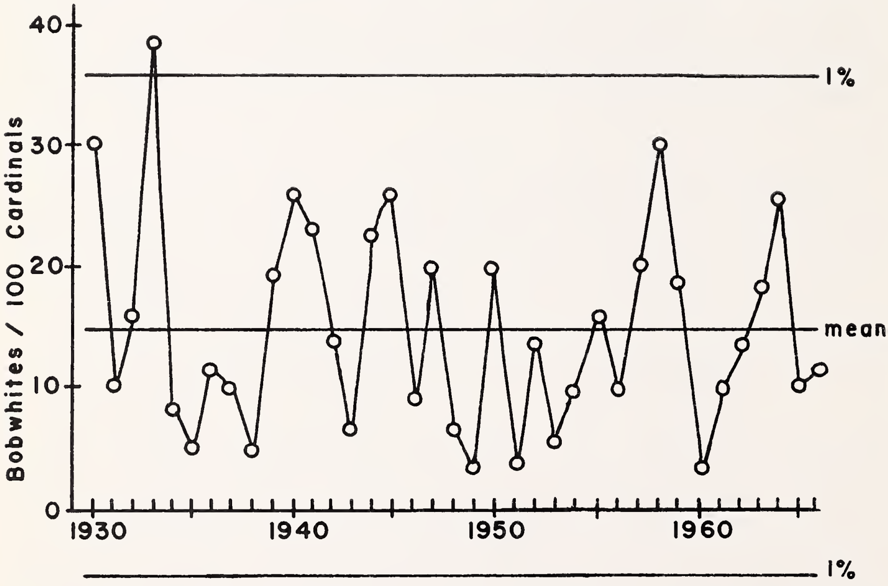


Figure 2. Number of Bobwhites per 100 Cardinals on Christmas counts in West Tennessee. See the text for the meaning of the horizontal lines.

The results of the study did, however, tell us a few things about Bobwhite populations. The following conclusions are based primarily on the Bobwhite per Cardinal ratio; the Bobwhite per party-hours supported them.

The charts, like that of Figure 2, demonstrated that Bobwhite populations fluctuate greatly from year to year. Statistical tests showed that there is little correlation between the population numbers from one year to the next. This suggests that the population size is more dependent on some environmental factor than on the population of the previous year (of course this idea cannot be carried too far, because Bobwhites can be produced only by Bobwhites). The yearly fluctuations result from the high annual mortality and the potentially high reproductive rate of Bobwhites, and the way in which these are affected by weather and other factors.

As was mentioned earlier, the figures showed no long-lasting trend either up or down in Bobwhite numbers. Extremely high ratios were found for East Tennessee in 1930, 1935, 1940, and 1943; for Middle Tennessee in 1938, 1949, and 1957; for West Tennessee in 1930, 1933, and 1958. Very little coincidence appears here.

The weather during the nesting and post-nesting season probably does have an important effect on reproductive success, but it is extremely difficult to identify the effective weather factors. We could find no correlation between high and low Bobwhite per Cardinal ratios with various combinations of temperature and rainfall during the previous May, June, or July.

It was thought that winter ice storms might reduce Bobwhite populations significantly. During the years covered by the Christmas count record, there were twelve serious ice storms in Tennessee (data from U. S. Weather Bureau: *Climatological Data: Tennessee*). These all occurred in January, February, or March. The Bobwhite per Cardinal ratio of the following Christmas count was high in one year, medium in seven, and low in four years. There apparently was no long lasting effect of the ice storms.

In reviewing the problem, we can say that the use of an "index bird" offers possibilities for evaluating the numbers recorded in Christmas counts, but is not an ideal method. Because the Christmas count records contain so much information about the abundance of birds over the years and over the country, a good method of evaluation would be very useful.

LITERATURE CITED

Collier, R. S. 1967. Method of examining population fluctuations in Bobwhite Quail (*Colinus virginianus*) in Tennessee. Unpublished M.S. thesis, University of Tennessee, Knoxville.

Tippett, L. H. C. 1950. Technological applications of statistics. John Wiley and Sons, N. Y. 189 p.

Department of Zoology and Entomology, University of Tennessee, Knoxville.

FOUR ADDITIONS TO THE TENNESSEE STATE LIST

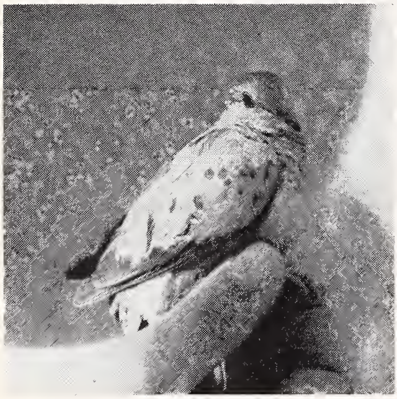
By T.O.S. Members

Editor's Note: Within the last six months four species of birds, whose occurrence in the state has not been previously published, have been observed in various parts of the state. Because of their proximity to each other in time, they have been reported here in chronological order as a group. Thanks are due to those members who have submitted these significant records for our consideration and publication.

GROUND DOVE—About 10:00 a.m. 20 October 1968, Mike Patterson caught a Ground Dove (*Columbigallina passerina*) in Richard Walker's garden, near Harbert Hills Academy.

This garden was not cultivated this year, and was overgrown with weeds. The mist nets were spread in a narrow walkway between grape vines and dwarf fruit trees. Adjacent to the garden, and probably the habitat that attracted the dove, is a four thousand acre tract, formerly second-growth hardwoods, now cleared for planting in pines. The clearing was done with a large disc-cultivator drawn by a bulldozer, which cut down and crushed the trees but left them scattered throughout the area. Saplings and composites have grown up through the brush, making a rich feeding ground for many species of birds. Those species best represented near the nets that day include Bobwhite, Mourning Dove, American Goldfinch, and Chipping, Field, White-throated, Fox, and Swamp Sparrows (*Colinus virginianus, Zenaidura macroura, Spinus tristis, Spizella passerina, S. pusilla, Zonotrichia albicollis, Passerella iliaca, Melospiza georgiana*).

The dove had a general coloration similar to a Mourning Dove, except for the wings. Folded, the wings were grey toward the front but richly rufous middle to tip. Extended, viewed from above, the wings were rufous on the primaries and primary coverts. The entire undersurface of the wing was a slightly lighter shade of rufous, except for the tips of the outer eight primaries, which were almost white. The upper surface of the wings had round spots of iridescent purple-black, about 3 or 4 mm diameter, and also some iridescent streaks at te tips of some of the secondary coverts. The outer tail feather on each side was blackish, with a white tip. The irises were pink to lavender.



GROUND DOVE

The feathers on the flanks, belly, and breast were partially sheathed, and among them were many quills about 5 to 10 mm long. The contour plumage was dense and fluffy and came off readily as the bird was handled. The tail feathers on the left were only about half as long as their counterparts on the right side, and were partially sheathed. On 7 November, the dove was examined again, and the tail was nearly symetrical.

The overall length of the dove was 175 mm, gently stretched; it would probably be slightly longer as a study skin. The wing chord was 85 mm. The tail, from the tip of the longest feather to its point of insertion, was 58 mm. The bill measurement was difficult, because of a rather long and shallow nostril, but could be described as 7.5 mm from the tip of the bill to the front of the nostril. The weight, taken on a torsion balance, was 38 grams.

After measuring, photographing, and banding the dove, it was released, as the species could readily be verified from the pictures. On 7 November, it was caught again in the same net at the same location, at approximately the same time of day. It had been released 20 October about one-half mile from the net.

A. C. Bent, *Life Histories of North American Gallinaceous Birds*, Dover, New York, 1963 (reprint of 1932 work), gives the range of this species as north to Montgomery, Alabama, and lists a number of casual occurrences north of the usual range, including Rogers, Arkansas, and Buncombe County, North Carolina. Frank M. Chapman, *Handbook of Birds of Eastern North America*, Dover, 1966 (reprint of 1939 edition), lists Tennessee among states with accidental records, without further details. The *A. O. U. Check-List of North American Birds,* Fifth edition, 1957, says "Breeds . . . to central Alabama, . . . Casual or accidental north to Iowa, Arkansas, northern Mississippi, northern Alabama, . . . *The Migrant* 23:3 has one mention of Ground Dove (Vaiden, 1952, three specimens from Bolivar County, Mississippi).

David E. Patterson, Harbert Hills Academy, Olive Hill 38475.

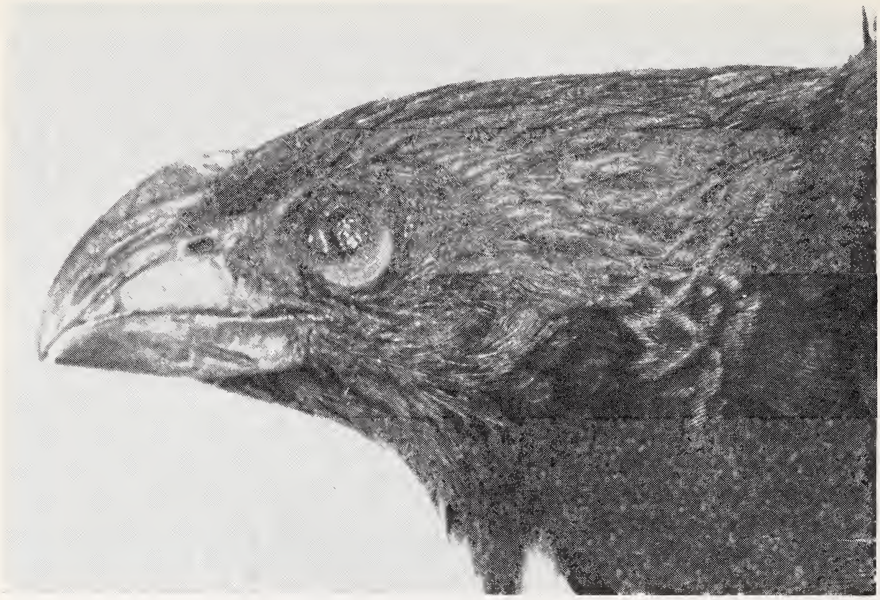
GROOVE-BILLED ANI—On 29 November 1968, a Groove-billed Ani (*Crotophaga sulcirostris*) was observed and collected about ten miles north of Dyersburg, in northwest Tennessee. This constitutes the first record of this tropical species for the state. The *A.O.U. Check-List of North American Birds* (1957) gives its range as,

> "Resident from southern Sonora, Mexico, and the lower Rio Grande Valley . . . , south through the tropical areas of Mexico . . . to Peru, . . . Casual in fall and winter in Louisiana and Mississippi, accidental in Minnesota, Nebraska, Kansas, Olkahoma, Arkansas and Florida."

A small colony of another species, the Smooth-billed Ani (*Crotophaga ani*) is resident in southern Florida. The Check-List groups the cuckoos, Roadrunner and anis together to form the family *Cuculidae*.

The bird was shot by a rabbit hunter who was hunting in a hay field, when the bird flew in and landed quite near him. It was unaccompanied by other birds and was apparently not disturbed by the presence of the hunter. Having noticed the bird's peculiar parrot-like bill and unusual flight pattern, the hunter decided that it must be a grackle with some type of deformity. He therefore collected the ani and sent it to me for examination. Having identified it, I sent the specimen in frozen condition to Albert F. Ganier, T.O.S. Curator, for further examination and for preservation in the form of a study skin for his collection. He has reported, so far, that the bird was a male in good physical condition and that the stomach contents are being analyzed to be reported upon later.

Dr. George Lowery, in his *Louisiana Birds* (1955), says with regard to this species in that state, that, except for two records, it is seen only in the coastal



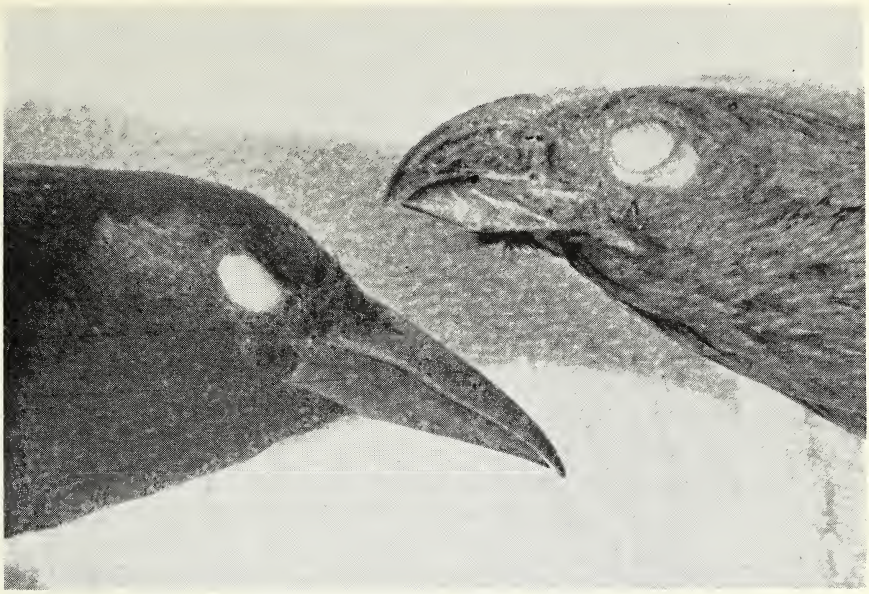
HEAD OF GROOVE-BILLED ANI

parishes (counties) of the state. He further states,

> "It is typically a bird of the tropics and usually ranges (northward) only to the lower Rio Grande Valley. Hence for the species to reach southern Louisiana in fall it must travel many hundreds of miles northeastward when other migratory birds in North America are moving southward."

The possibility of this individual having been blown northward, a little at a time, might be substantiated by a review of the weather conditions prior to 29 November. According to the Weather Bureau at Memphis the weather during this period was very unusual. The wind was blowing almost continuously out of the southwest. A peak was reached on 28 November, which was Thanksgiving Day, when the wind averaged 25 mph with gusts to 44 mph. All day of 27 November, it rained from Texas to the Ohio Valley. This precipitation ended by early morning of the 28th. That night a cold front passed through the area and the winds shifted to northeast at a moderate 5-10 mph. The temperature dropped from a high of 67° F. on the 28th to 38° F. on the morning of the 29th. Just prior to the movement through this area of the cold front, a front moved into Texas out of the west bringing with it unseasonably cold weather and some snow. This type of weather combination is very unusual and could account for the appearance of this bird far out of its normal range.

Unlike the other members of their family, the anis have perceptibly iridescent plumage about their neck and upper parts. The nape of the Groove-billed Ani is streaked with silver while that of the Smooth-billed Ani is streaked with bronze, according to Chapman, *Handbook of Birds of Eastern North America* (1966). The upper mandible is not wide but is high and arched thus providing an unmistakable field mark. The accompanying photographs made by Henry Parmer show the ani and the Common Grackle for comparison.



HEADS OF ANI AND GRACKLE COMPARED

Bent, *Life Histories of North American Cuckoos etc.*, (1964) says that anis are birds of the open country, that they are primarily insectivorous and, singly or in small flocks, are prone to search near the feet of cattle or mules for insects. Also, they occasionally pluck ticks and other insects from the animals' skins. These characteristics should be kept in mind for possible future identifications when we observe domestic animals in pastures and there are apparently grackles in their vicinity.

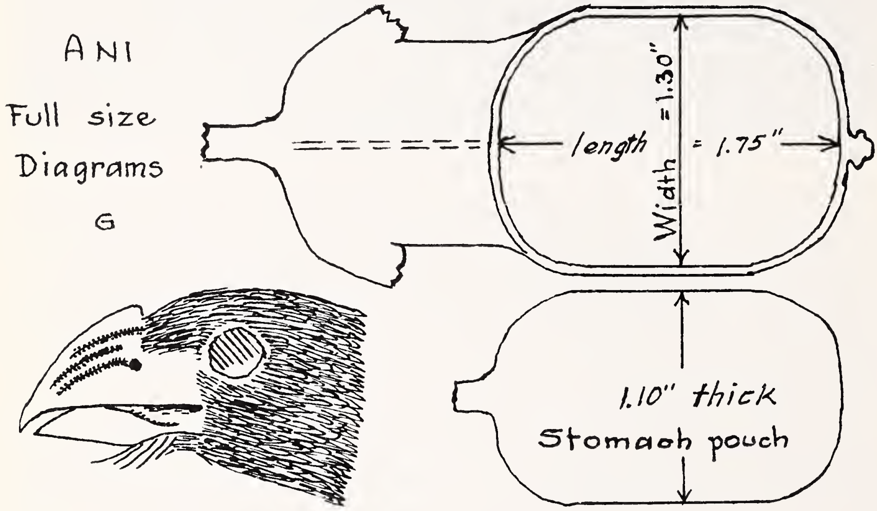
Kenneth Leggett, Dyersburg 38024.

POST-MORTEM OF A GROOVE-BILLED ANI—The specimen of Groove-billed Ani (*Crotophaga sulcirostris*) recorded above by Mr. Leggett, came into my hands for further examination and for preservation as a study skin. After this had been completed, I concluded that the bird was so remarkable in many ways a further description would be of interest.

The beak, of course, is the most striking feature of its appearance, causing wonderment as to why it is so shaped for the use of an insectivorous bird. The upper mandible is no wider than that of other birds of its size but the height is abnormal and so shaped as to give strength for biting action. Since the ani is largely insectivorous, it may be assumed that a strong beak is necessary for crushing large live insects before swallowing. Such insects are then swallowed whole at once and are not picked to pieces as is the custom with most other birds. Three grooves on each side of the upper mandible, likewise add strength against lateral bending.

A less visible but nearly unique feature of the bird's appearance, is the fact that it is equipped with long eyelashes, seven in number and four millimeters long. These point downward entirely across the eye and no doubt were evolved for the purpose of protecting the eyes from nettles and grass as the bird searches under grass for its prey. The lashes may also serve to protect the eyes from the kick of struggling grasshoppers. I do not know of any American birds that are equipped with eyelashes except the owls and the Roadrunner. Those of the owls are very short and do not point downward; those of the Roadrunner are somewhat similar to the ani but by no means so obvious.

A further striking feature of the ani is that its plumage is iridescent. The feathers of the neck, shoulders and upper back are blue-black, distinctly margined with a lighter color, thus producing a scaly appearance. The margins of the neck feathers are silver-grey. Those margined elsewhere are tipped with iridescent greyish-green, thus producing the iridescent appearance above mentioned. The plumage otherwise is of charcoal-black. The legs and feet are strong, black and scaly, while the toes are like those of the cuckoos, two extending forward and two backward. Iridescence is rare among our native birds, the most striking example being the Ruby-throated Hummingbird whose iridescent throat, viewed at the proper angle, reflects its ruby color with the brilliance of a flame.



On removing the skin from the carcass, the belly was found to be much larger than the breast, being abnormally distended with food. The bird had no "crop" for the temporary storage of food, such as that of pigeons, chickens or hawks and in place of a gizzard had a thin-walled stomach pouch into which the food passed directly thru the gullet from the mouth. On cutting open the pouch it was found to be packed with insects, mostly still intact. The contents were wet with digestive juices and the mass was brown in color. Dr. James T. Tanner, of the Department of Zoology, University of Tennessee, kindly agreed to identify the stomach contents and has reported as follows. "Contents.—Grasshoppers; Family Acrididae (Short-horned Grasshoppers), probably 3 species but not readily identifiable. 11 more-or-less whole individuals plus 14 heads (which apparently take longer to digest), making a total of 25. (There were a few other grasshopper parts, but they may have come with the heads). Spiders.—Family Lycosidae (Wolf Spiders). 3 individuals.

End of one unidentified insect, not a grasshopper. The grasshoppers and spiders are both characteristic of pastures and similar places."

The conversion of all this roughage, of wings, claws, heads and entire bodies of grasshoppers, to a consistency suitable for passing on through the lower intestinal tracts, would appear impossible for a bird not equipped with a muscular, gravel abetted gizzard such as is possessed by a turkey. Further, it was surprising that on this cold morning of 29 November, this bird could find so many insects. We know, however, that on mild days in midwinter, large grasshoppers may be flushed in grassy fields and thickets, so evidently they hibernate under leaves and thick grass and the anis have learned where to find them.

The specimen was a mature male in good physical condition with breast well filled out but no fat in evidence. Measurements of the length, wing and tail were 329, 135 and 178 millimeters respectively or 13.00, 5.32 and 7.00 expressed in inches. The long tail was in process of moult, some feathers being still partly in sheath, but one old central tail feather, still in place, enabled taking of the full tail measure. Forward pointing bristles under the lower mandible perhaps served some useful purpose. Some of the features mentioned above are shown in the accompanying drawing.

Albert F. Ganier, 2112 Woodlawn Dr., Nashville 37212.

BROWN-HEADED NUTHATCH—On 14 December 1968, Nat Halverson and son Mike observed a small nuthatch visiting their suet feeder, which is located inside Bradley County Line, just northeast of Collegedale, Tennessee. At first glance of this bird at feeder, it was thought to be the Red-breasted Nuthatch (*Sitta canadensis*) which is a sporadic visitor to the area.

A short time later the bird returned with a companion. The birds were studied very closely this time. The size was smaller but very close to the above mentioned species. A very noticeable brown cap and a light spot on the nape, drew much attention. It was also noted there was an absence of the superciliary line. The field marks noted, made the identification very simple. The first record for the Brown-headed Nuthatch (*Sitta pusilla*) for Tennessee had just been recorded.

Benton Basham, T.O.S. member, was called to verify the new record. The birds were seen at close range, fifteen feet, with 7x35 binoculars. All field marks were clearly seen. The author, being very familiar with this species, having seen it in the pine woods in several southern states, had no problem in substantiating the observation. Dr. C. F. Dean, a noted natural history photographer at Collegedale, was called, and excellent color pictures were gotten of our new discovery.

I have heard the un-nuthatch-like call several times since my first observation in mid-December at the Halverson home. The birds have been observed daily since their discovery over two and one half months ago. Many members of the Chattanooga Chapter of T.O.S. have had the opportunity to see, up to now, these elusive avian friends north of the Georgia Line.

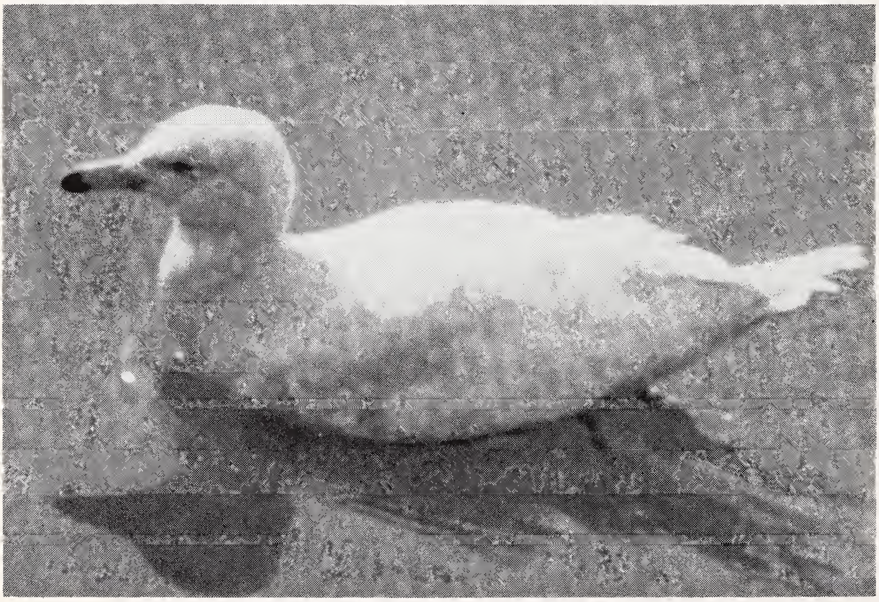
These small up-side-down birds will be followed very closely this spring, with hopes they will linger. And who knows, there might be six or more later on in the summer.

Benton Basham, P. O. Box 426, Collegedale, 37315.

GLAUCOUS GULL—A Glaucous Gull (*Larus hyperboreus*), in the pure white plumage of a second year bird, was found in Old Hickory Lake, east of Nashville, in Davidson County, on 18 January 1969. It was standing on the shore near the west end of the dam, and was perceptibly larger than an immature Herring Gull (*Larus argentatus*) standing close by. On our closer approach it waded into the lake, swam away, soon flushing and flying about 200 yards to the shore at the west end of the dam.

There it proved possible to approach it within 50 feet in a car, and it was studied at leisure, comparing feature by feature with printed descriptions and illustrations. The plumage was entirely pure white, as shown in flight and when standing at close range. The feet were pale pink. A large dark mark near the end of the bill was conspicuous. Eyes were dark brown or possibly black. Head and bill were not noticeably smaller in proportion to the general appearance of gulls which we have observed hundreds of times. At home an extensive search through the literature convinced us the bird was a Glaucous Gull, which neither of us had ever seen before.

Later that day Mrs. Carol Knauth and Laurence O. Trabue separately visited the spot without finding the bird. On 19 Jan. Parmer and Trabue made an extensive search along the shores of the lake without finding the bird. On 25 Jan. we found it below the dam, in the tailwaters, swimming slowly for a distance of several hundred yards, close to the eastern (Sumner County) shore, back and forth, apparently feeding. On 26 Jan. we were again on the river bank, with Trabue. The gull was patrolling close to the shore, occasionally



Glaucous Gull

perching on the bank. Parmer obtained both black and white and color photographs at this time. Trabue watched the gull while it found a dead minnow, tossed it aside, then retrieved it and finally swallowed it. Finally, on 2 Feb. it was again observed swimming along the eastern shore of the river, once perching on a drifted log lodged against the shore. On this occasion Mrs. Amelia R. Laskey studied the bird with a 30x scope, and Mrs. Elmore and Miss Mary C. Wood joined in the observations. This was the last observation. On 20 and 23 Feb. it could not be found.

In all of our contacts we found this big gull much less wary than the other 3 species frequenting the same area. At times it seemed tired, or ill, and occasionally closed its eyes. Only once was it seen in flight, although the other gulls present habitually foraged on the wing above the tail-waters, where the Glaucous Gull preferred to swim.

In reading, we learned this species is a very rare straggler in the interior of our country south of the Great Lakes, and this occurrence is one of the farthest south so far reported. It is new to the Nashville area, and apparently new to the state list as well.

Henry E. Parmer, 3800 Richland Ave., Nashville 37205.

Harry C. Monk, 406 Avoca Street, Nashville 37203.

COME TO UPPER EAST TENNESSEE FOR THE FIFTY-FOURTH ANNUAL STATE T.O.S. MEETING 9, 10, 11 MAY 1969,

AT EAST TENNESSEE STATE UNIVERSITY, JOHNSON CITY, TENNESSEE

There will be a paper session on 10 May, at which papers describing original research in the area of ornithology may be presented. If you should wish to participate in this paper session, please send the title and a synopsis of your topic and an estimation of the time required for its presentation to the Editor as soon as possible.

ROUND TABLE NOTES

WOOD DUCKS NEST IN TOWN.—*The Migrant* for Sept. 1960 (31:54), I told of a pair of Wood Ducks that nested in a narrow tree-filled little valley behind my home and three blocks from the center of Dyersburg, Tenn. On 27 June of that year, they led 8 tiny ducklings through traffic toward freedom. They have continued to nest there and often the young have been captured by children and thoughtless people, while they crossed the several streets, school grounds, a used car lot, and yards of small houses, enroute to a ditch that leads to Forked Deer River, a mile away.

This year, Mr. Wm. F. Ozment who operates the used car lot, found that on 21 April an employee, in his absence, had rounded up a mother Wood Duck and her ten ducklings as they tried to cross the lot and had driven them into a closed shop building. Mr. Ozment on his return succeeded in getting them all into a crate and drove them at once to the river where he released them. A few days before, on 17 April, it was reported that another Wood Duck and 14 young were seen crossing Cedar street near the ice plant, enroute from the same nesting area to the river. This valley nesting area is about two blocks long and a block wide, well filled with large trees including old beech trees that doubtless afford suitable overhead nesting cavities in their trunks. Our newspapers have been alerted to this annual exodus in hopes of securing interested protection for the duckling's initial journey into the wild.

ROGER GANIER, Dyersburg 38024.

A WOOD DUCK ODDITY—Checking duck traps on hummocks along Long Point ditch on Reelfoot National Wildlife Refuge 7 August 1968, produced an unusual appearing female Wood Duck (*Aix sponsa*).

In handling the duck for sexing and banding, examination of the head presented a most unusual appearance. The tongue was projected downward through the soft portion of the lower mandible about three-quarters of an inch. The tongue had been in this position for some time as the appearance indicated. It was yellowish, rounded, quite firm to touch and dirty from contact with the ground while the duck was feeding. The inside of the mouth seemed quite normal; no discolorations or abrasions were noticed.

The tongue was moistened and gently pushed upward through the mandible where it lay in the mouth in an upward curving position. The duck's mouth closed normally and the hole in the lower mandible was readily visible. The tongue could be seen through the hole. This odd-appearing duck showed no sign of any other injury.

S. W. GIVENS, Reelfoot National Wildlife Refuge.

WHITE-RUMPED SANDPIPER IN SULLIVAN COUNTY—During the spring count of the Elizabethton Chapter T.O.S. on 5 May 1968, four White-rumped Sandpipers (*Erolia fusicollis*) were sighted together at the fish hatchery near Blountville. The weather varied from cloudy to sunny with intermittent gusts of wind. The temperature ranged from 55° to 60°. Observation time was from 11:30 a.m. to 1:00 p.m.

The observers were Mrs. Harold Dillenbeck, with 6x30 Micron binoculars, Mrs. George N. Dove, with 7x35 Selsi binoculars, and Joy Dillenbeck, with 8x30 Tasco binoculars.

Though White-rumped Sandpipers are not common in East Tennessee during spring migration, the unusual aspect of this observation was four together with no other "Peep" sandpipers around.

The first small sandpiper was sighted with four Lesser Yellowlegs on the muddy bank of a partially drained pond to the right side of the road approaching the hatchery. Some of the ponds in this area had cattails growing along the edges. Cattails also fringed the edge of the creek which ran completely around the hatchery. Near a pond behind the one visited by the sandpipers were some Rusty Blackbirds. Among the cattails by the creek were Red-winged Blackbirds.

Observation of this "Peep" was from 20 to 30 minutes at a distance of nine yards to six feet. The under parts, except for the neck and breast, were a very bright white, the back quite rusty. (Peterson, *A Field Guide to the Birds,* p. 96: "In Spring it [White-rumped Sandpiper] is quite rusty; in fall, grayer than any other 'Peep'.") The white extended high on each side and appeared to go under the rear of the wings. Scale markings set off pronounced patterns on the rusty back. Some buff appeared in the markings. The sandpiper stood from one fourth to one third as high as the yellowlegs. Its body was smaller than a Robin. The tail seemed slightly notched. Both the legs and the bill were dark brown or black. This bird did not flush as did the yellowlegs. Its call sounded like a faint "peep".

The only observer with former experience with White-rumped Sandpipers was Mrs. Dillenbeck; Therefore, we consulted "Peterson" and "Robbins" (Robbins, *et. al. Birds of North America*). These were the results:

1. Not Pectoral—It has a sharp line between the breast and belly and yellow legs.
2. Not Sanderling—It runs swiftly instead of working slowly and has a white wing stripe and a stockier body.
3. Not Baird's—It is unlikely to be in this area.
4. Not Least—It has yellow legs as summer approaches, and is black along the edge of its wings.
5. Not Semipalmated—Its breast is more streaked than the bird seen.
6. Not Western—It seems to be only a fall migrant in this area and feeds in deep water, sometimes submerging its head. This bird probed in mud.
7. White-rumped?—It matched except the bird was not flushed, and the white rump was not seen.

After study and discussion, the ponds on the left of the road were checked. The third pond in the group had been drained; only puddles an inch or so deep remained here and there. In the mud were five Lesser Yellowlegs, a Greater Yellowlegs, a Short-billed Dowitcher, a Solitary Sandpiper, and four "Peeps." The Solitary was flying in and out. With careful listening the call of the "peeps" was "jeep" not "peep." Observation lasted about fifteen minutes and from a distance of eleven yards to ten feet. These birds were identical in appearance to the "peep" spotted earlier. The other birds flushed as approached, but a clap of hands was necessary to flush the small sandpipers. All four showed solid white rumps. They flew about twenty feet across the pond and started feeding in the mud again.

One of the ponds in this group held an American Coot. Along the creek, in the woods, and on the steep bank that sloped to the ponds were swallows, Cardinals, Blue Jays, and other small birds. We did not return to the first "peep" observed, as we were satisfied it was of the same species.

Mrs. George N. Dove, 1801 Seminole Dr., Johnson City 37601.

NASHVILLE'S THIRD SAW-WHET OWL RECORD. At about 7:30 p.m., 28 October 1968, the writer found a Saw-whet Owl (*Aegolius acadicus*) in the dry gravel creek bed that is the approach to his summer camp 20 miles west of Nashville. Apparently, the bird flushed as it was touched by the car's headlights. It flew across the creek bed and was lost in an instant as the writer said to his companion, H. C. Brehm, "Why that looked like a Woodcock!" The car stopped and Brehm managed to keep the bird in sight and in a few seconds pointed a very bright flashlight out the left window. There, just about 5 feet from the window was a tiny owl perched on a small limb. Instantly it was realized that it was not a Screech Owl, due to the distinctive face pattern, large amount of white on the sides of the neck and chin, and the broad vertical red stripes on a white background for its breast and abdomen. The bird remained perched for about one minute in the bright light.

The next day a search was made of available literature, and a specimen in A. F. Ganier's collection was checked. The plumage proved to be that of an adult bird and very close to that of a photograph on page 431 of *Water, Prey, and Game Birds of North America.*

Henry E. Parmer, 3800 Richland Ave., Nashville 37205.

PIGEON HAWK NEAR REELFOOT—On 10 November 1968, Janice and I spent the day at Reelfoot Lake. We were looking for birds of prey including any Bald Eagles that might have arrived for the winter. The weather was cloudy and cool and a weak cold front was forecast to pass through the area that night, bringing with it a chance of snow.

About 2:00 p.m., we were driving just east of Tiptonville. As we passed a light pole I spotted a small hawk perched on top. I barely got a glimpse of him but he looked different from the numerous Sparrow Hawks that we had been seeing. I turned around and drove back near the pole on which he was perched.

The most distinct feature of the hawk was a long barred tail. He appeared larger than a Sparrow Hawk and the upper portion of his body was a bluish-gray. He was engaged in eating a small animal and he seemed unaware of the passing traffic until a horn was sounded by a passing car. This caused him to leave his prey and fly in a small circle, returning to the same pole. While he was flying his pointed wings confirmed our identification. This bird was a male Pigeon Hawk (*Falco columbarius*).

The traffic was so heavy that I was forced to move down and park in a nearby driveway. As I walked back to the vicinity of the hawk, he spotted me and flew down to the next pole with his prey. I was able to see the prey well enough to tell it was a small bird. He seemed unusually tame and allowed me to approach fairly close. By the way he ate the bird he seemed to be hungry.

I continued to observe him for about twenty minutes thru 9 X 36 binoculars. When we left the area he was still perched on the pole. However, when we returned about two hours later with other members of the Reelfoot Chapter, we were unable to locate him. This is the second time that I have seen a Pigeon Hawk. On 22 October 1967, I was with Mr. and Mrs. Ben Coffey, Jr. and other members of the Memphis Chapter when one was sighted on the new airport at Reelfoot Lake (*The Migrant* 38:94). We were able to observe this bird fairly well but he was not as tame as the one mentioned above.

Since 1962, there have been ten other records of Pigeon Hawks published in *The Migrant*. One was at Nashville, three were in Knox County, three were near Chattanooga and three were reported on the Annual Fall Hawk Count in East Tennessee.

Kenneth Leggett, Dyersburg 38024.

VERMILION FLYCATCHER AGAIN RECORDED AT REELFOOT—About noon on 23 November 1968, Janice and I observed a male Vermilion Flycatcher (*Pyrocephalus rubinus*) near the new airport at Reelfoot. We observed the bird for about twenty minutes through 9 X 36 binoculars as he flew around in a cypress on the edge of the water.

The flycatcher actions of the bird coupled with its brilliant red sides and head; black back and wings make it easy to identify. It also has a black stripe running through its eye.

The weather was unusual. The temperature was 70° F. and the wind out of the southwest at 18-22 knots with gusts to 26 knots. That night a weak cold front passed through the area.

I informed Betty Sumara of Tiptonville about seeing the bird and on 25 November she and Jean Markam went to the site and found a male Vermilion Flycatcher.

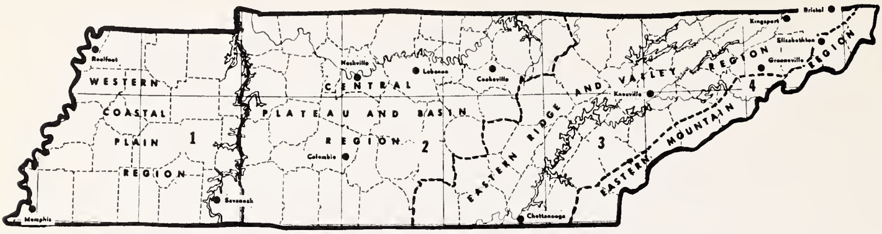
I have checked a number of sources and all give the range of the Vermilion Flycatcher as being in the southwestern United States and northern Mexico, casual in winter along the Gulf Coast to Florida. There is no mention of it ranging this far northeast.

There are two other published observations in *The Migrant* of Vermilion Flycatchers at Reelfoot. Mr. Arlo Smith in his observation (*The Migrant* 36:14) reported seeing at least two male Vermilion Flycatchers on 15 October 1961. Guy Hogg also reported one 27 December 1967 (*The Migrant* 39:12). Through personal contact, John DeLime at Samburg reported to me, that he had seen one in December 1961 and one in December 1966. Mrs. John Lamb of Dyersburg reported that she had seen one on 14 May 1960 while boating at Reelfoot Lake.

I am inclined to think that the Vermilion Flycatcher may be a more common fall visitor at Reelfoot than has been generally believed.

Kenneth Leggett, Dyersburg 38024.

THE SEASON


Reelfoot
WESTERN COASTAL PLAIN REGION
1
Memphis
Savannah
Nashville
Lebanon
Cookeville
CENTRAL PLATEAU AND BASIN REGION
Columbia
2
EASTERN RIDGE AND VALLEY REGION
3
Knoxville
Chattanooga
Kingsport
Bristol
Elizabethton
Greeneville
4
EASTERN MOUNTAIN REGION

Charles R. Smith, *Editor*

The months of November, December, and January were characterized by cold, dry weather across most of the state. Four inches of snow was reported from the Ridge and Valley and Mountain Regions for the first week of January.

It was the general impression of many observers that the populations of small land birds, such as sparrows, were reduced this winter. Though such trends are difficult to evaluate quantitatively, the writer has noted a definite scarcity of such species as the Rufous-sided Towhee and White-throated Sparrow. Waterfowl populations on the TVA lakes also appeared to be somewhat reduced.

Northern finches were represented across the state primarily by the Evening Grosbeak, with all regions reporting their occurrence regularly and in fair numbers. Reports of the Pine Siskin and Purple Finch were sporadic, with these species occurring in only small numbers across the state. Red Crossbills were reported only from the Bristol area of the Ridge and Valley Region and from the Mountain Region.

Outstanding records for the period include the Ground Dove at Savannah, Groove-billed Ani at Dyersburg, Glaucous Gull at Old Hickory Lake, and Brown-headed Nuthatch at Chattanooga. Each of these observations represented a new state record. Further details of these observations may be found in articles elsewhere in this issue.

Other records of interest include the Vermilion Flycatcher at Reelfoot, Surf Scoter at Nashville, White-winged Scoter at Chattanooga, Harris' Sparrow at Nashville, and Western Sandpiper at Cherokee Lake. Sandhill Cranes were reported from the Plateau and Basin and Ridge and Valley Regions. Summer species wintering in the state included the Brown Thrasher in the Ridge and Valley Region, Baltimore Oriole at Dyersburg, and Yellow-breasted Chat at Memphis. Details of the above observations may be found in the reports which follow.

WESTERN COASTAL PLAIN REGION—*Loon-Hawks:* Common Loon: 1 Jan. (1) S. Canada Goose: 23 Nov. (500) R. Gadwall: 23 Nov. (300) R. American Widgeon: 23 Nov. (1500) R. Shoveler: 23 Nov. (150) R. Common Goldeneye: 1 Jan. (40) S. Bufflehead: 1 Jan. (36) S. Sharp-shinned Hawk: 23 Nov. (2) R, 13 Jan. (1) S. Cooper's Hawk: 23 Nov. (1) R. Bald Eagle: 22 Nov. (7), 11 Jan. (19) R. Marsh Hawk: 10 Nov. (2) R, 19 Jan. (3) S. Pigeon Hawk: 10 Nov. (1) R (KL).

Killdeer-Oriole: Killdeer: 10 Nov. (95) R, 23 Nov. (93) R. American Woodcock: beginning 4 Feb. (2) singing, compared to (16) all winter last year, S. Ground Dove: 7 Nov. (1), retrap of October banding, S. Groove-billed Ani: 29 Nov. (1) D (KL), now in Ganier collection. Whip-poor-will: 25 Nov. (1) freshly dead downtown M (VJ, BC, LC). Ruby-throated Hummingbird: 4 Nov. (1) R (EC). Vermilion Flycatcher: 23 Nov. (1), 8 Dec. (1) R (KL, JL). Red-breasted Nuthatch: reports throughout season and region. House Wren: 12 Jan. (1) Clarkdale, Ark. (BC). Hermit Thrush: 18 Jan. (1) D. Yellow-breasted Chat: 12-16 Dec. (1) downtown bank holly hedge in M (VJ), 24 Dec.-5 Jan. (1) M (LC), third winter record. Baltimore Oriole: all winter in yard (1, female) D (JT).

Grosbeak-Longspurs: Evening Grosbeak: 23 Nov. (11) Henderson (EdC), (2) R (KL); 26 Nov.-2 Dec. (8) Jackson (EdC); 24 Dec. (4) Brownsville (ER); 31 Dec. (2) D (JH); 6 Jan. (2) D; 12 Jan. (2) Humboldt; remaining grosbeak observations are from Shelby County and are their first records ever from each location: 24 Nov. (7) Whitehaven, 6 Dec. (9) Bartlett, 5 Jan. (15) Millington (OWs), 8 Jan. (18) Arlington, 30 Jan. (40) Ellendale (JS), 30 Jan. (12) Germantown (HDs), first Memphis record 25 Dec. (1), 26 Dec. (13) (WLW), up to 22 at 4 other M localities in Jan. and later, 16 banded (WLW). Purple Finch: Dec. and Jan. (100) D (AB), common M. Pine Siskin: 23 Nov. (3) D (CH). Longspurs: none seen in four-county area near M.

Locations: D—Dyersburg, M—Memphis, R—Reelfoot Lake, S—Savannah.

Observers: AB—Ann Brigham, BC—Ben B. Coffey, Jr., LC—Lula Coffey, CC—Charlie Cox, EdC—Mrs. Ed Carpenter, EC—Eugene Cypert, CH—Celia Hudson, JH—Mrs. Jack Hudson, VJ—Victor Julia, JL—Janice Leggett, KL—Kenneth Leggett, DP—David Patterson, ER—Ella Ragland, JS—Mrs. Albert Sabatier, JT—Judy Taylor, OWs—Mr. and Mrs. Orrin Williams, WLW—Dr. W. L. Whittemore.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGIONS—*Loons-Ducks:* Common Loon: 17 Nov. (4) WR (KD, FW), 7 Dec. (1) BL (HCM, HEP), 2 Jan. (2) WR (KD, RTB). Horned Grebe: 4 Nov. (1) RL (MCW), from 17 Nov. (1) to a peak of (16) 9 Jan. WR (KD), 19 Jan. (32) OHL (LOT, HEP). Pied-billed Grebe: from 17 Nov. (3) to a peak of (28) 26 Dec. WR (KD), an occasional record NA and CV. Great Blue Heron: 17, 26 Dec. (1) LD (RTH), 2 Jan. (2) WR (KD, RTB), 22 Jan. (2) OHL (MCW). Canada Goose: 16 Nov. (4000) DRR (NC), from 17 Nov. (20) to a peak of (104) 26 Dec. WR (KD), scarce NA with 16 Nov. (1) and 22 Jan. (6), both OHL (MCW). Blue Goose: 16 Nov. (12) DRR (NC). Mallard: 16 Nov. (8000) DRR (NC), from 17 Nov. (250) to a peak of (800) 8 Dec. WR (KD), scarce NA with 31 Dec. (1) BL (HEP) being only record there, and 16 Nov. (8) OHL (LOT) being peak there. Black Duck: only duck near normal NA; 16 Jan. (40) OHL (LOT), 18 Jan. (76) BL (HCM, HEP), 9 Jan. peak (150) WR (KD). Gadwall: 28 Oct. (105) down to 9 Jan. (1) WR (KD) only report. Pintail: 16 Nov. (200) DRR (NC), a peak (13) 8 Dec. WR (KD), none NA. Green-winged Teal: 8 Dec. (3), 26 Dec. (1) WR (KD). American Widgeon: 16 Nov. (500) DRR (NC), 2 Jan. a peak of

(44) WR (KD), no reports NA. Redhead: 26 Dec. (7), 2 Jan. (12) WR (KD), (2) occasionally during period RL (MCW). Ring-necked Duck: 25 Nov. (175) down to (40) 31 Jan. RL (MCW); 8 Dec. (31), up to (165) 2 Jan., then down to (5) 9 Jan. WR (KD); very few seen elsewhere. Canvasback: 5 Dec. a peak of (8) RL (MCW), 25 Jan. (2) OHL (HCM, HEP), 8 Dec. a peak of (23) WR (KD). Lesser Scaup: 2 Nov. (125) ML, WB (MCW), 18 Jan. (22) BL (HEP), only record there; end of period (30) RL (MCW), far below normal. A peak of only (7) 26 Dec. WR (KD). Common Goldeneye: 5 Dec. (12) RL (MCW) and about that number during remainder of period; 26 Dec. a peak of (19) WR (KD); 19 Jan. about (100) OHL (LOT, HEP). Bufflehead: from 21 Nov. (2) to a peak of (6) 9 Jan. RL (MCW); 8 Dec. a peak of (8) WR (KD); 19 Jan. (11) OHL (LOT, HEP). Surf Scoter: from 11 Nov. occasionally to 26 Dec. (1) RL, at times by (MCW, EE, MB). Hooded Merganser: 14 Nov. (2), 20 Nov. (9), 9 Dec. (1) BL (HEP), 2 Dec. (9) RL (LOT), 2 Jan. a peak of (40) WR (KD). Common Merganser: 9 Jan. (3) RL (MCW) only report. Red-breasted Merganser: 17 Nov. (1), 2 Jan. (2) WR (KD). No reports of ducks not listed.

Vultures-Gulls: Black Vulture: 27 Nov. (87) MC (LOT), probably a roost. Golden Eagle: about 10 Dec. (1) WB (HC *fide* MCW). Bald Eagle: 16 Nov. (1) DRR (NC), most unusual was one to five during Jan. and Feb. LD (RTH); peaks were 12 Dec. (5) and 20 Jan. (4). Marsh Hawk: 16 Nov. (2) DRR (NC), 18 Nov. (1) BL (HEP). Osprey: 4 Dec. (1) LD (RTH) (only second Dec. date known to writer for Tenn). Sandhill Crane: 6 Nov. (3) TF (HOT) (third middle Tenn. record). American Coot: 20 Nov. (200) to 31 Jan. (150) RL (MCW); 17 Nov. (2300) to 9 Jan. (230) WR (KD); scarce OHL Common Snipe: 22 Nov. (1) BL (HEP), 11 Jan. (1) WB (MCW). Least Sandpiper: 7 Dec. (3) PPL (HCM, HEP), 16 Nov. (43) DRR (NC). Glaucous Gull: 18 Jan. (1) in 2nd year plumage OHL (HCM, HEP), again 25 Jan. (HCM, HEP) and 26 Jan. with (LOT). Herring Gull: 19 Jan. (6) (LOT, HEP); peak OHL 2 Jan. (8); peak WR (KD). Ring-billed Gull: 13 Dec. (73) BL (HEP); peak OHL 18 Jan. (100) (HCM, HEP); peak WR 9 Jan. (80) (KD). Bonaparte's Gull: 16 Nov. (25) OHL (LOT) down to (3) 19 Jan. (LOT, HEP).

Owls-Cowbirds: Great Horned Owl: 4 Dec. (3) LD (RTH), (2) near H all period (SB). Belted Kingfisher: 3 Jan. (17) RR-WB (MCW). Eastern Phoebe: (1) most Dec. and 6 Feb. LD (RTH), no reports elsewhere. Horned Lark: (50) near dam OHL all period (NC), 7 Jan. (1) LD (RTH). White-breasted Nuthatch: several reports suburban yards NA where never previously seen; (ARL) (1) H, first in 40 years there! Red-breasted Nuthatch: scattered reports NA over period. Wrens: all seem scarce NA. Robin: scarce NA, absent CV. Eastern Bluebird: scarce NA. Golden-crowned Kinglet: 1-3 during Dec. LD (RTH). Cedar Waxwing: 8 Nov. (100) NA (SB), 5 Dec. (15), 26 Jan. (14) LD (RTH). Myrtle Warbler: almost absent NA, 11 Jan. (1) LD (RTH). Baltimore Oriole: 8 Nov. (1) male bathing H (ES). Rusty Blackbird: 14 Nov. (5) H (JOE), 7 Dec. (10) BV (HCM, HEP), 27 Dec. (21) TJ (HCM, LOT, HEP). Common Grackle: 18 Jan. (100,000) WB (MCW), almost absent NA. Brown-headed Cowbird: 28 Nov. flock (250) CC (MCW).

Dickcissel-Sparrows: Dickcissel: 7 Dec. (1) H (HH). Evening Grosbeak:

NA's largest invasion; first was 21 Nov. (1) H (JW), then several reports (1-3); largest numbers were at H (GRM) with (1) 21 Dec., then daily from 28 Dec. (1) up to a peak of (42) 29 Jan; some other reports are: 25 Nov. (27) WB, H (HB), 11 Jan. (11) WB (MCW), 27 Jan. (12) CV, H (TT). Purple Finch: widely distributed NA, but in smaller flocks than usual. (1-8) during Dec., Jan. LD (RTH). Pine Siskin: only report from (KAG), NA. 28 Nov. (6), 30 Nov. (10), both BS, and 10 Jan. (1), 27 Jan. (3), both H. American Goldfinch: larger numbers than usual NA, to (85) LD (RTH). Slate-colored Junco: numbers below normal NA. Field Sparrow: only sparrow that may be holding its own NA. Harris' Sparrow: 10 Dec. (1) H (HCM), 12 Dec. (1) H (HH), 6, 7 Jan. (1) H. (EC), 16 Jan. (1) MR, NA (FM, ABH). White-throated Sparrow: very scarce NA. Swamp Sparrow: very scarce NA. Song Sparrow: well below normal NA.

Locations: BL—Bush Lake, BS—Basin Springs, BV—Buena Vista, CC—Coffey County, CV—Cookeville, DRR—Duck River Refuge, Hustburg section, H—home area, LD—Lilydale area, MC—Marshall County, ML—Morton Lake, Woodbury, MR—Moran Road, Nashville, NA—Nashville Area, OHL—Old Hickory Lake, PPL—Percy Priest Lake, RL—Radnor Lake, RR—River Road, Woodbury, TF—Todd Farm, Murfreesboro, TJ—Two Jays Sanctuary, WB—Woodbury, WR—Woods Reservoir.

Observers: MB—Mike Bierly, SB—Sue Bell, HB—Mrs. Henry Bratton, RTB—Ralph T. Bullard Jr., HC—Howard Campbell, NC—Nashville Chapter T.O.S., EC—Elizabeth C. Collins, KD—Kenneth Dubke, JOE—John O. Ellis, EE—Erline Elmore, LF—Louis Farrell, Jr., HH—Helen Hodgson, ABH—Mrs. A. B. Herron, RTH—Roy T. Hines, ARL—Amelia R. Laskey, GRM—Mr. and Mrs. G. R. Miller, HCM—Harry C. Monk, FM—Fanny Murphy, HEP—Henry E. Parmer, ES—Ellen Stringer, TT—Thelma Tinnon, HOT—Henry O. Todd, LO Lourence O. Trabue, JW—Jesse Wills, FW—Frank Ward, MCW—Mary C. Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION—*Loons-Geese:* Common Loon: regular in small numbers, max. 7 Dec. (20) BWP (KD), 11 Jan. (13) CkL (TK), 13 Nov. (15) SHL (WC). Pied-billed Grebe: regular in varying numbers, max. 10 Nov. (37) BL (CRS, JBS). Double-crested Cormorant: 14 Dec. to 9 Jan. (3-regularly) BWP (KD, JD, *et. al*), 15 Dec. (1) CkL (TK). Great Blue Heron: regular, max. 7 Dec. (77) HRA (KD), 30 Nov. (15) HR (RH), 18 Jan. (15) HR (RN, RH), 25 Jan. (33) PHL (LRH, CRS), 14 Nov. (14) SHL (WC, JW). Green Heron: 4 Nov. (1 appeared sick or injured) BWP (KD). Black-crowned Night Heron: 9 Nov. (4) HR (RH), 16 Nov. (1) HC (TK), 16 Nov. (12) HR (RH), 24 Nov. (3) HR (RH), 30 Nov. (4) HR (RH), 14 Dec. (1) TRG (JD). Canada Goose: a few scattered, (1000 to 3000) during Nov. Dec. Jan. at HRA (KD). Snow Goose: 10 Nov. (2) HRA (KD). 4 Nov. (9) HRA (KD), 10 Nov. (1) HRA (KD).

Ducks-Vultures: Mallard: regular, Max. 11 Jan. (240) CkL (TK). Black Duck: regular, max. 14 Dec. (685) HRA and BWP (KD). Gadwall: regular in small numbers, max. 17 Nov. (270) PHL (WC). Pintail: 9 Nov. (8) HR (RH), 14 Dec. (2) TRG (JD), 15 Dec. (2) WBL (JD), max. 16 Jan. (43)

HRA (KD). Green-winged Teal: Chattanooga area only, 20 Dec. (7) BWP (KD), 14 Dec. (6) TRG (JD), max. 4 Nov. (32) HRA and SB (KD), 16 Jan. (1) HRA (KD). American Widgeon: regular, max. 11 Jan. (220) CkL (TK), 15 Nov. (212) BL (GD, HD). Shoveler: 24 Nov. (4) HR (RH), 30 Nov. (40) HR (RH) only records. Wood Duck: few, 6 Nov. (1) PHL (GD, HD), 16 Nov. (3) HR (RH), 23 Jan. (2) MP (KD). Redhead: 4 Nov. (44) SB, BWP, HRA (KD), max. 13 Nov. (54) SHL (WC), 7 Dec. (12) BWP (KD), 16 Jan. (1) BWP (KD). Ring-necked Duck: scattered records during period, max. 11 Jan. (400) CkL (TK). Canvasback: only 7 Dec. (4) BWP (KD). Greater Scaup: reported only in lower portion of region, first 7 Dec. and max. 16 Jan. (88) BWP (KD). Lesser Scaup: few during period in most areas, max. 13 Nov. (221) SHL (WC). Common Goldeneye: from 13 Nov. (3) SHL (WC) to 16 Jan. (8) BWP (KD), max. 25 Jan. (65) BL (LRH, CRS). White-winged Scoter: only 5 Jan. (1-shot) ChL (Ann Farmer *fide* JD). Bufflehead: a few regular, max. 11 Jan. (130) Ckl (TK). Ruddy Duck: 2 Nov. (7) BL (GD, HD), 4 Nov. (5) SB (KD), 10 Nov. (6) HR (RH), max. 13 Nov. (31) SHL (WC), 16 Nov. (10) HR (RH), 7 Dec. (2) BWP (KD). Hooded Merganser: 2 Nov. (3) BL (GD, HD), 14 Nov. (22) SHL (WC, JW), regular in Chattanooga area, max. 24 Nov. (45) BWP (JD). Common Merganser: only 10 Nov. (1) BWP (KD) and 7 Dec. (1) HRA (KD). Red-breasted Merganser: 13 Nov. (4) SHL (WC), 14 Nov. (2) SHL (WC, JW), 20 Dec. (1) BWP (KD). Black Vulture: regularly (4-5) between Col and PV (BB), 13 Nov. (5) SHL (WC), 5 Dec. (3) SHL (WC).

Hawks-Plovers: Sharp-shinned Hawk: 3 Nov. (1) SHL (WC), 1 Dec. (1) SHL (WC), 3 Jan. (1) MP (KD, RTB). Cooper's Hawk: 13 Nov. (1) SHL (WC), 1 Dec. (2) SHL (WC), 19 Jan. (1) KC (TK). Red-tailed Hawk: few regularly, max. 2 Jan. (15) BC (KD, RTB). Red-shouldered Hawk: 24 Dec. (1) WBL (JD), 4 Nov. (1) SB (KD), 20 Dec. (1) HRA (KD), 16 Jan. (1) BWP (KD), 23 Jan. (1) MP (KD). Bald Eagle: 16 Nov. (1) HR (RH), 24 Dec. (2) WBL (JD), 31 Dec. (1) WBL (JD). Marsh Hawk: 9 Nov. (1) HR (RH), 16 Nov. (2) HR (RH), 7 Dec. (1) HRA (JD), 15 Dec. (1) WBL (JD), 31 Dec. (1) WBL (JD). Osprey: only record, last 6 Nov. (1) BL (GD, HD). Sandhill Crane: 10 Nov. (3) SB (ML), 10 Nov. (276) ChL (JD). American Coot: regular, significant numbers: 9 Nov. (2000) HR (RH), 13 Nov. (550) SHL (WC), 16 Nov. (500) HR (RH), max. 14 Dec. (6800) TRG (JD). Killdeer: small numbers regularly, max. 10 Nov. (590) HRA and SB (KD). American Golden Plover: 12 Nov. (3) HRA (KD). Black-bellied Plover: 4, 10 Nov. (1) SB (KD).

Woodcock-Gulls: American Woodcock singing regularly at AM since 27 Dec. (KD, *et. al*). Common Snipe: regular, max. 12 Nov. (108) SB (KD). Lesser Yellowlegs: 4 Nov. (3) HRA (KD), 10 Nov. (1) SB (KD). Pectoral Sandpiper: 10 Nov. (1) SB (KD), 7 Dec. (1-injured) SB (KD). Least Sandpiper: 28 Nov. (2) CkL (TK), regular in Chattanooga area, max. 16 Jan. (43) HRA (KD). Dunlin: regular in Chattanooga area, max. 12 Nov. (125) HRA (KD), 16 Nov. (10) CkL (TK), 23 Nov. (8) CkL (TK), 28 Nov. (1) CkL (TK). Semipalmated Sandpiper: 23 Nov. (28) CkL (TK), 28 Nov. (3) CkL (TK). Western Sandpiper: 23 Nov. (2) CkL (TK). Herring Gull: regularly in small numbers, max. 14 Nov. (8) SHL (WC, JW). Ring-billed

Gull: regular, significant numbers: 14 Nov. (89) SHL (WC, JW), 6 Jan. (250) BWP (JD), Dec. and Jan. (1000) CkL (TK). Bonaparte's Gull: 13 Nov. (3) SHL (WC), 15 Dec. (28) CkL (TK), 20 Dec. (3) HRA (KD).

Owls-Swallows: Barn Owl: regular at a.m. (KD, JD) and during Nov. and Dec. G (RN). Great Horned Owl: regular G (RN) during Nov. and Dec., 7 Dec. (1) HRA (JD), 2 Jan. (1) SHL (WC, TMH). Barred Owl: 3 Dec. (1) HRA (JD), 7 Dec. (1) HRA (JD). Red-headed Woodpecker: 3 Nov. (1) SHL (WC). Tree Swallow: 9 Nov. (1) HR (RH), 16 Nov. (1) HR (RH).

Nuthatches-Warblers: Red-breasted Nuthatch: reported regularly in small numbers over the region. Brown-headed Nuthatch: two regularly since Dec. in Chattanooga area (see article, this issue) (KD). Winter Wren: few records, 2 Nov. (2) G (RN), 13 Nov. (1) G (RN), 15 Dec. (1) WBL (JD), 29 Dec. (2) SHL (WC). Brown Thrasher: 24 Nov. (1) HR (RH), 13 Jan. (1) JC (KJ), one daily at G during Nov., Dec. and Jan. (ED). Hermit Thrush: 4 Nov. (1) SHL (WC), 29 Dec. (1) SHL (WC). Water Pipit: regular (1 to 25) HRA and SB (KD) during period. Cedar Waxwing: regular in good numbers in Chattanooga area with max. (300) Col. (BB), not mentioned in other reports. Pine Warbler: two during period at Col (BB, *et.al*). Palm Warbler: 17 Nov. (1) BWP (JD).

Finches: Evening Grosbeak: first 9 Nov. (7) Col (RS) then regular in Chattanooga area with max. of 50 (BB); 15 Nov. (5) B (CJL) with numerous small flocks in Bristol area up to 50 birds; 29 Nov. (10) G (RN) and during months of Dec. and Jan. numerous flocks of 10 to 20 or more at feeders in Greeneville area; 18 Dec. (40) JC, smaller numbers throughout the period at Elizabethton; 5 Jan. (12) Blount County (TK). Purple Finch: in limited numbers from most areas during period. Pine Siskin: noted only from Chattanooga with report: "regular in small numbers 1-5 (JD, KD, BB, *et. al*)." Red Crossbill: 29 Dec. (17) SHL (WC), 19 Jan. (19) SHL (WC, TMH). Grasshopper Sparrow: 10 Nov. (1) BL (CRS, JBS), 15 Dec. (1) "banded" Col (ML, RS). Vesper Sparrow: 4 Nov. (10) SB (KD), 10 Nov. (25) AM (KD), 13 Nov. (1) SHL (WC). Chipping Sparrow: 15 Nov. (1) BL (GD, HD), 4 Jan. (1) Col (BB). Fox Sparrow: reported in small numbers and irregularly throughout region.

Locations: B—Bristol, BWP—Booker Washington State Park, BL—Boone Lake, BC—Blount County, ChL—Chickamauga Lake, CkL—Cherokee Lake, Col—Collegedale, G—Greeneville, HR—Holston River near Rogersville, HRA—Hiwassee River Area, HC—Hamblen County, JC—Johnson City, KC—Knox County, MP—Morse Pond, Georgia, PHL—Patrick Henry Lake, PV—Pikeville, SB—Savannah Bay, SHL—South Holston Lake, TRG—Tenn. River Gorge, WBL—Watts Barr Lake.

Observers: FA—Fred Alsop, BB—Benton Basham, RTB—Ralph T. Bullard, WiC—Wilford Caraway, WC—Wallace Coffey, ED—Elva (Mrs. Chester) Darnell, JD—Jon DeVore, HD—Mrs. Harold Dillenbeck, GD—Mrs. George Dove, KD—Kenneth H. Dubke, HCE—H. C. Epperson, TMH—Tim M. Hawk, LRH—Lee R. Herndon, RH—Robert Holt, RHu—Richard Hughes, KJ—Katherine Jones, TK—Tom Koella, ML—Mike Lilly, CJL—Mrs. Charles

J. Lowery, FO—Frances (Mrs. Earl) Olson, JWa—Jack Wagner, MW—Mark Wagner, GWW—Geo. W. Wallace, JBS—James B. Shepherd, CRS—Charles R. Smith, RS—Roger Swanson, JTT—James T. Tanner, JWa—Jack Wagner, MW—Mark Wagner, GWW—Geo. W. Wallace, JW—Johnny Wood, BY—Bill Yambert.

J. Wallace Coffey, 508 Spruce Street, Bristol 37620.

EASTERN MOUNTAIN REGION—*Loons-Sparrows:* Common Loon: 9 Nov. (2) WaL (CRS). Pied-billed Grebe: 17 Dec. (3) LL (FA, JMC). Mallard: 9 Nov. (1) WaL, 24 Jan. (14) WaL, (CRS). Lesser Scaup: (6-8) throughout period on WiL. (CRS). Common Goldeneye: 17 Dec. (1) LL (FA, JMC). Bufflehead: (6-30) throughout period on WiL (CRS); 17 Dec. (1) LL (FA, JMC). Ruddy Duck: 17 Dec. (2) LL (FA, JMC). Hooded Merganser: 17 Dec. (1) LL (FA, JMC). Ruffed Grouse: 17 Dec. (2) SF (FA, JMC), 1 Nov. (2) CNF (RE, TL), 9 Nov. (1) CCG (RN). Turkey: 17 Dec. (3) CC (FA, JMC), 1 Nov. (4) CNF (RE, TL). American Woodcock: 31 Jan. (1) singing MC (CRS). Screech Owl: 1 Nov. (2) CNF (RE, TL). Phoebe: 17 Dec. (2) CC (FA, JMC). Red-breasted Nuthatch: (12-50) throughout period on RM (FWB); only scattered records of individual birds at lower elevations; 1 Nov. (4) CNF (RE, TL). Winter Wren: 9 Nov. (1) CLG (RN) Robin: flock of (250) 10 Nov. EGC (LRH). Myrtle Warbler: 17 Dec. (1) CC (FA, JMC). Cedar Waxwing: 12 Nov. (20) MC (CRS). Rusty Blackbird: 9 Nov. (1) EGC (LRH). Evening Grosbeak: throughout the period in E; max. 30 Nov. (100) E (RDM); 3 Nov. small flock in G, first of season (JMC). Pine Siskin: 3 Nov. (70) RM (FWB). Red Crossbill: 3 Nov. (6) RM (FWB), 17 Nov. (1) RM (FWB), 18 Dec. (3) MC (CRS); small flock seen throughout period G (AS). Fox Sparrow: 3 Nov. (4) RM (FWB).

Locations: CC—Cades Cove, CCG—Casi Creek, Greeneville, CLG—Clark's Creek, Greeneville, CNF—Cherokee National Forest, E—Elizabethton, EGC—Elizabethton Golf Course, G—Gatlinburg, LL—Laurel Lake, MC—Milligan College, RM—Roan Mountain, SF—Spence Field GSMNP, WaL—Watauga Lake, WiL—Wilbur Lake.

Observers: FA—Fred Alsop, FWB—Fred W. Behrend, JMC—James M. Campbell, RE—Danny Ellis, LRH—Lee R. Herndon, TL—Tom Lane, RDM—Roby D. May, CRS—Charles R. Smith, AS—Arthur Stupka.

Danny Ellis, 1 Hedgewood Dr., Knoxville 37918.

NOTICE TO MEMBERSHIP

It has been requested by our Secretary, Helen B. Dinkelspiel, that all members review the minutes of the "T.O.S. Annual Meeting, 1968" as recorded in *The Migrant* 39:36-39. Special attention should be paid to both the Board of Directors' Meeting and the General Business Meeting, so that we will be familiar with them at the next Annual Meeting this May.

PREPARATION OF COPY FOR PUBLICATION

The purpose of *The Migrant* is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, specific, and descriptive.

STYLE: Recent issues of *The Migrant* should be used as a guide in the preparation of manuscripts. Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N.W., Washington, D. C. 20016.

COPY: Manuscripts should be typed double spaced on 8½ x 11" paper with adequate margins, for editorial notations, and should contain only entries intended for setting in type, except the serial page number. Tabular data should be entered on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper in black and white (not in color). Instructions to the editors should be given on a separate sheet. Weights and measurements should be in metric units. Dating should be in "continental" form (e.g., 7 March 1968).

NOMENCLATURE: Common names should be capitalized followed by binomial scientific name in italics only after the first occurrence in the text for both regular articles and "Round Table Notes", and should conform to the A.O.U. Check-list 5th edition, 1957. Trinomial should be used only after the specimen has been measured or compared with typical specimens.

BIBLIOGRAPHY: When there are more than five references in an article, they should be placed at the end of the article, otherwise they should be appropriately included in the text.

SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

REPRINTS: Reprints are available on request. Reprint requests should accompany article at the time of submission. Billing to authors will be through the state T.O.S. Treasurer.

Books for review and articles for publication should be submitted to the editor. Seasonal reports and items should be forwarded to the appropriate departmental editor whose name and address will be found on the inside front cover.

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T.V. TOWER CASUALTIES AT NASHVILLE IN AUTUMN 1968

By Amelia R. Laskey

Casualties collected in autumn 1968 at WSIX and WSM TV towers in Nashville totaled 5,734 birds of 78 species. Daily coverage at WSM from late August through 8 Nov. yielded 5,537 of 73 species. The greater number of these fell on the night of 25-26 Sept., 5,408 of 62 species. At WSIX it was not possible to give complete daily coverage; therefore, the total of 197 birds of 39 species does not represent the total number of casualties there.

The heavy kill of 5,408 at WSM followed a cold front passing through 25 Sept., with overcast, some precipitation, a drop in temperature, and winds that shifted from southwest to north. Birds were strewn south and east of the tower and cables for hundreds of feet on the parking concrete, driveway, and lawns, into the woods and brush. Many were injured or temporarily stunned. Several persons worked for hours collecting, but it is certain that all were not found in the heavy undergrowth. Of special note are the observations of Phil A. Murphree of WSM who reported that when he came on duty at midnight, no casualties were visible, but at 2:00 a.m. many dead birds were seen.

Warblers suffered the heaviest losses—4,857 of 30 species, 81% of the total for that night. There were 1,847 Ovenbirds, 808 Tennessee Warblers, 777 Magnolia Warblers, 329 Chestnut-sided Warblers, and 311 Blackpoll Warblers. Otherwise, the casualty list for the season was light. The largest numbers for a night occurred 24-25 Sept. with 31 and 10-11 Oct. with 36. Northerly winds, overcast, and light precipitation were involved.

A heavy kill did not always follow every occurrence of this type of weather or surface fog. However, the height above ground at which the birds were traveling would doubtless have an effect on their attraction to surface lights and tall, lighted structures. A layer of clouds below their flight altitude would also serve to protect them from the distraction of bright lights.

In a report on tracking birds at night in migration, W. W. Cochran and Richard W. Graber state that migrating birds fly at heights of 1,000 to 10,000 feet, but that most of them fly between 3,000 and 8,000 feet. (1968 Ill. Nat. Hist. Survey Reports #69).

Radar observations will doubtless reveal answers to puzzling questions. In several years of radar studies of spring migration, I. C. T. Nisbett and William H. Drury have attained illuminating conclusions. They say: "With few exceptions, ground observers miss the densest movements seen on radar and the largest arrival of birds which they notice usually follow relatively sparse movements in disturbed weather. Usually, the observation of a large wave of arrivals means that migrants in the air have been stopped by a meteorological barrier —rain or fog, or a front or a change to unfavorable winds—and our data show that migration in fact tends to be sparse when there is a danger of such changes. This is the reason why previous studies have reported 'maximum migration' in tropical air ahead of cold fronts; they have not been recording maximum *migration* but maximum *interruption* to migration." (Weather and Migration. 1967. Mass. Aud.) It is hoped that a similar study will be conducted for autumn migration.

Among the casualties, a few records merit special note. A Cape May Warbler on 6 Sept. in very obscure plumage is a new extreme for early autumn arrival. A White-eyed Vireo and a Philadelphia Vireo of 24 Oct. are late departures. Two Connecticut Warblers of 26 Sept. are significant as this species has been rarely found in Nashville in autumn and these are the first found in the fall casualties. A White-crowned Sparrow of 20 Oct. (WSIX) is the third individual of this species found in 21 years of collecting at ceilometer and TV towers here.

The complete casualty list follows with WSIX preceding WSM. Species found only at WSM are preceded by an asterisk (*):

Pied-billed Grebe *4; Green Heron *1; Virginia Rail 1; Sora *3; Mourning Dove *11; Yellow-billed Cuckoo 1; Black-billed Cuckoo *1; Whip-poor-will *6; Belted Kingfisher *1; Yellow-shafted Flicker *1; Yellow-bellied Sapsucker *1; Yellow-bellied Flycatcher 1-6; Traill's Flycatcher 1-1; Least Flycatcher 1-3; E. Wood Pewee *16; Brown Creeper *1; House Wren *2; Winter Wren 1-1; Long-billed Marsh Wren *6; Catbird 8-58; Brown Thrasher *1; Wood Thrush 1-10; Swainson's Thrush 8-20; Gray-cheeked Thrush 2-2; Veery 2-1; Golden-crowned Kinglet 1-4; Ruby-crowned Kinglet *4.

White-eyed Vireo 1-24; Yellow-throated Vireo *40; Solitary Vireo 1; Red-eyed Vireo 3-239; Philadelphia Vireo 2-23; Warbling Vireo 2; Black-and-white Warbler 6-312; Prothonotary Warbler *3; Worm-eating Warbler *5; Golden-winged Warbler *6; Tennessee Warbler 35-824; Orange-crowned Warbler *1; Nashville Warbler *19; Parula Warbler 1-6; Yellow Warbler *11; Magnolia Warbler 13-786; Cape May Warbler 1-2; Black-throated Blue Warbler *6; Myrtle Warbler *2; Black-throated Green Warbler 2-71; Cerulean Warbler *2; Blackburnian Warbler 1-82; Yellow-throated Warbler *2; Chestnut-sided Warbler 8-330; Bay-breasted Warbler 5-117; Blackpoll Warbler *10.

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ACKNOWLEDGMENTS

Grateful acknowledgment is extended for their help to Clyde Anderson, Mr. and Mrs. W. E. Fentress, Katherine A. Goodpasture, H. C. Monk, H. E. Parmer, Jimmie Parrish; and to the personnel of WSM, especially P. A. Murphree and Mr. Henderson.

1521 Graybar Lane, Nashville 37215.

THIRD ANNUAL TENNESSEE ORNITHOLOGICAL SYMPOSIUM

The third annual symposium will be held 25-26 October 1969, at Pete Smith's Watts-Bar Resort, Watts Bar Dam, Tennessee 37395. Reservations may be made by writing Pete Smith or by phoning 615-365-6638. The symposium is strictly informal and will commence Saturday, 1:00 p.m. EST and consist of discussions dealing with Tennessee birds and related subjects. Sunday will consist of a barge trip, compliments of the Tennessee Game and Fish Commission, to view the waterfowl concentrations on Hiwassee Island. Anyone wishing to be on the program may contact Kenneth H. Dubke, 3302 Navajo Drive, Chattanooga, Tennessee 37411, for further details.

ANNUAL AUTUMN HAWK COUNT, 1968

By Thomas W. Finucane

The T.O.S. count of the September Broad-winged Hawk (*Buteo jamaicensis*) migration, 1968, totaled 24,036, a record count, with more than 99% of the flight passing between 12 and 24 Sept. This migration wave was bounded by two intervals of adverse weather and interrupted in the middle by several days of clouds and rain. The old record was 15,585 in 1959, and before that 10,998 in 1956. Totals for other species of hawks were; 217 in 1968; 301 in 1965; and 459 in 1959. Corresponding hours of observation were: 299; 157; and 327. There were no eagles and no Peregrine Falcons, but a Pigeon Hawk was reported by Robert Quillen.

The Mendota Fire Tower lookout had 13,164 hawks in 107 hrs. of observation, including 7,469 on 21 Sept.; the old T.O.S. record day's count was 4,985 at Elder Mt., 25 Sept., 1960. The Dunlap Fire Tower had a total of 3,668, the Gate City Tower had 3,625, all on 21 Sept.; the Rogersville-Kyles Ford Tower had 1,513, and the Bays High Spur Tower had 515. Three of these six lookouts—Dunlap, Gate City, and High Spur—had not previously been involved significantly in the T.O.S. project. The other three have usually been our most productive lookouts.

The Elder Mt. Fire Tower has been removed to make room for a new residential area. The tower was on the east edge of what is usually labeled Raccoon Mt., looking down on the Tennessee River where it flows north past Chattanooga. Beginning in 1954, when Gene and Adele West counted 36 hawks in migration there, this lookout has contributed a total of 18,357 Broad-winged Hawks. According to Jon DeVore, the Dunlap Fire Tower, first tested by the Wests, 21 Sept., should develop into an even better lookout than Elder was. Dunlap is 16 miles NNW of the old site and 600 ft. higher (2,367 vs. 1,750 ft.) on the west margin of Walden's Ridge overlooking Sequatchie Valley. The Chattanooga total for 1968, including three other stations besides Dunlap, was 4,356, the area's highest except for its 1960 count, which soared above 6,000. On the other hand, 4,356 is only 18% of the T.O.S. total for the 1968 fall migration. In 1956, '58, '60, '61, '63, and '64, Elder Mt. had higher percentages.

The Gate City Fire Tower is on the Clinch Mt. about 14 miles down range from the Mendota Fire Tower. The 3,623-hawk report, 21 Sept., at the Gate City Tower was only its second contribution to our Broad-winged Hawk data. On 17 Sept., 1960, Garland Ruth spent four hours there and recorded 70 hawks, while the count at Mendota was 165 in 8 hrs. The Gate City Tower is more difficult to get to. Joe Finucane and the writer hiked up the mountain, 21 Sept. arrived after 11 a.m., and counted 1,200 hawks in the first hour. Our object had been to compare the Gate City lookout with other stations on the Clinch Mt.: Haytor's Knob, Mendota, and Rogersville; we had hoped they all might have been active.

On 20 and 22 Sept., the counts at the Mendota lookout were 2,318 and 1,119. On the latter day, Ruth Nevius counted 1,113 in four hours at the

Rogersville Fire Tower, the only data from there during the three days of big migration, and uprange from Mendota, Haytor's Knob had 413. On the next two days Mendota had 672 and 144, for a five-day total of 11,722, between two periods of adverse weather.

The Bays High Spur tower was built in 1968. There is a good road running up to the tower from the south side of Heck Holler Road, which connects Routes 66 and 70, between Greeneville and Rogersville. Tom Odom recorded flights there of 104 and 413 on 15 and 21 Sept. On 15 Sept., McQueen's Knob and Holston High Knob had record counts: 73 in 3½ hrs. vs. a maximum of 48 in eight previous counts, and 150 in 7 hrs. after a maximum of 80 in 15 counts in previous years. Then on 21 Sept., McQueen's had 161 in seven hours. The uniformity of these (1958) counts on the two stations on the Holston Mountain is in sharp contrast with the data on High Spur, which, like Mendota, had considerably higher counts on 21 Sept.

The highest count made in the earlier migration period came on Monday, 16 Sept., with 677 hawks in nine hours at the Mendota Fire Tower. The wind was high and the sun was mostly obscured by clouds. From noon to 4:30 only four Broad-winged Hawks were recorded. In the final 2½ hrs., 624 hawks flew by, including 124 after 6 p.m. and nine after 6:30. The weather had improved the wind was down. Over the following three days the weather worsened, with rain on the 18th and 19th, and the count dropped to zero. Then on Friday, 20 Sept., the big migration started, with 2,300 recorded at the Mendota Fire Tower.

Weekend weather and participation were good. Six stations reported on Sunday, 15 Sept., the same number on the following Saturday, and eight on Sunday, 22 Sept. The Mendota Fire Tower had coverage every day, 13 to 24 Sept., rain or shine, and after two days of rain, 27, 28, and 29 Sept. It also had adequate early coverage, but we do not claim to have had the last part of the Broad-winged Hawk migration, which can be significant in early October. Also we used to sample the peak of the Sharp-shinned Hawk migration; after dropping off badly, this migration has jumped up to record levels in recent years, according to reports from Hawk Mt., Pa. The Broad-winged Hawk is the main target of the T.O.S. hawk migration project, however, and it seems to be generating more interest every year.

KEY TO REPORTERS

A—Jon Devore, Jack and Mark Wagner, Chattanooga; B—Ken Dubke, Chattanooga; Wallace Coffey, Bristol; Chas. Smith, Johnson City; Bill and Dick Finucane, Kingsport; C—Charlotte, Grace, Mike, Barney, and Marion Finucane, Mrs. Ferrell, Kingsport; Ch—Chas. Smith, Craig Shepherd, Johnson City; D—Dubke; E—Arthur and Elizabeth Smith, Roy Allen, Kingsport; F—Thos. Finucane, Kingsport; G—Lisa Jefferson, Annette St. Clair, Carmilla Falco, Cathy Webb, Kingsport Girl Scouts; H—Lee R. Herndon, Ron Creager, Elizabethton; Bob Quillen, Bristol; I—Bob Faucette, Wallace and Carolyn Coffey, Bristol; J—Julia Godsey, Tom and Connie Green, Bristol; K—Mr. and Mrs. Cantwell, Bristol; Mr. and Mrs. Nave, Kingsport; Mr. and Mrs. David Smith, Nickelsville, Va.; L—Mr. and Mrs. George W. Wallace, Chattanooga; N—Mrs. Richard Nevius, Greeneville; M—Melanie Odum, Kingsport; O—Tom and Tom III Odom, Kingsport; P—Mr. Ferrell, Mr. and Mrs. Glasheen, and 13 Scouts, Kingsport; Q—Bob Quillen, Bristol; R—Richard Nevius; S—E. E. Scott, Nickelsville, Va.; T—Joe Finucane; U—Gene and Adele West; V—Jon DeVore, Chattanooga; W—Wallace Coffey; X—Hugh and Maxine Crownover, Chattanooga; Y—Howard Yarbrough, Chattanooga; Z—Mr. and Mrs. Cantwell, Enno and Roger Van Gelder, C. T. Ottenfèld, Carolyn Coffey, Bristol; Martha Fenstemacher, Eleanor Christy, Abingdon, Va.; ZZ—Jennie Riggs, Nashville.

OBSERVATION STATIONS

C—Chimney Top, 3100'; D—Dunlap Fire Tower, 2637'; E—Elder Mt., 1750'; H—Holston Mt. Fire Tower, 4200'; I—Bays High Spur Fire Tower, 1931'; K—Rogersville-Kyles Ford Fire Tower, 3000'; L—Bark Camp Lake, Virginia; M—Mendota Fire Tower, Va., 3018'; N—Nickelsville, Va.; P—Moccasin Gap; Q— McQueen's Knob Fire Tower, 3885'; R—River Mt. Fire Tower, 2397'; S—Signal Point Park, 1620'; T—Gate City Fire Tower, 3300'; U—Chickamauga Lake; V—8 mi. northwest of Nashville; Y—Haytor's Gap Knob Fire Tower, Va., 4208'.

TABLE 1
ANNUAL AUTUMN HAWK COUNT, 1968

No.	Date	Obs.	Hrs.	Sta.	Wind	Sky	Temp.	ShS	Cpr	RdT	RdS	Bwg	Msh	Osp	SpH	Unid
1	9/8	V	16	S	-	-	-	1	1	9	-	10	-	-	1	-
2	8	V	3	S	3 S	1	-	-	-	-	-	-	-	-	-	-
3	8	S	3	N	-	-	-	-	-	-	-	31	-	-	-	-
4	8	BFT	6	M	5-2 ESE	2	73	-	1	-	-	7	-	-	-	-
5	10	D	6	E	1 NW	1	-	-	-	-	-	7	-	-	-	-
6	13	V	3½	S	1 ENE	0	-	-	-	2	-	25	-	-	1	-
7	13	F	6	M	2 NE	0	62	1	-	-	-	91	-	-	-	1
8	14	AU	4½	S	3 SE	2	-	1	-	1	-	155	-	-	-	-
9	14	MO	8	K	2-0 E	0	68	2	-	2	2	145	-	-	-	5
10	14	TF	9	M	1 E-N	0	66	-	1	2	1	117	-	1	-	3
11	15	AUX	7	S	3 SE	1	-	2	1	1	-	19	-	-	2	-
12	15	W	3½	Q	1-2 SE	1	69	-	-	2	-	71	-	-	-	-
13	15	MO	7		0-2 E-SE	1	73	1	-	2	-	99	-	1	-	3
14	15	TF	7	H	0-3 SE	1	70	-	1	1	1	146	1	-	-	1
15	15	RN	4½	K	3-4 SE	1	66	2	-	2	1	219	-	-	-	-
16	15	CGS	8	M	3-4 E	1	-	-	2	2	-	326	-	1	-	-
17	16	D	5	S	3 E	2	-	-	-	1	-	2	-	-	-	-
18	16	Q	-	P	-	-	-	-	-	-	-	80	-	-	-	-
19	16	FS	9	M	1-5 SE	3	65	1	-	3	1	671	-	-	1	-
20	17	FS	8½	M	2-4 SE	4	66	-	-	1	-	98	1	2	-	-
21	18	W	4½	Q	7 SE	4	61	-	-	-	-	4	-	-	-	-
22	18	F	3/4	M	2-4 SSE	5	65	-	-	-	-	-	-	-	-	-
23	19	D	3	S	2 E	3	-	-	-	1	-	-	-	-	1	-
24	19	S	4	L	-	3	-	-	-	-	-	15	-	7	6	-
25	20	DV	8½	S	2 SSW	5	-	1	-	-	-	-	-	-	-	-
26	20	FSH	8½	M	3-0 SE-NW	2	-	7	1	1	-	2304	-	1	2	2
27	21	AD	7	S	2 SSW	1	-	1	1	2	-	66	1	-	3	-
28	21	U	7½	D	3 SSE	1	-	2	-	-	-	1648	1	-	4	-
29	21	WZ	7	Q	3-4 SE	2	74	-	1	2	-	154	1	-	-	3
30	21	O	7½		0-2 SE-NW	1	73	-	-	3	2	407	-	-	-	1
31	21	TF	7½	T	0-2 SE-NW	1	-	1	-	1	-	3619	-	1	1	-
32	21	CSP	9	M	0-1 SE-N	1	-	-	1	-	-	7466	-	1	-	1
33	22	XY	3	S	2 SSW	1	-	-	-	-	-	18	-	-	-	-
34	22	AUX	7	D	3 SE-NW	1	-	1	-	1	-	1714	2	2	3	-
35	22	Ch	5¼	H	2-3 NNW	0	69	-	3	-	-	6	-	-	-	-
36	22	T	7½	C	0-1 E	0	66	-	-	1	-	37	-	-	-	-
37	22	O	7	R	0-3 SE-W	0	68	1	-	1	1	22	-	1	-	3
38	22	N	4	K	0-1 S	0	77	3	-	-	-	1130	-	-	-	-
39	22	SFK	8	M	0-3 SE-N	1	73	1	1	1	-	1115	-	1	-	-
40	22	I	7½	Y	v.high NE	2	68	-	1	4	3	398	-	-	3	1
41	23	L	1	U	2 NNW	0	-	-	-	-	-	350	-	-	-	-
42	23	D	8	D	3 SW	0	-	1	-	3	-	280	-	-	-	-
43	23	SFJ	8	M	0-3 SE-N	0	65	3	1	2	1	665	-	1	-	-
44	24	D	5	D	2 NW	0	-	-	-	2	-	-	-	1	-	-
45	24	F	6	M	0-3 SE-S	1	72	-	-	-	-	144	-	-	-	-
46	27	F	5	M	0-3 SE-NE	2	58	-	-	2	-	41	1	-	-	1
47	28	ZZ	-	V	-	-	-	-	-	-	-	94	-	-	-	-
48	28	ET	8	M	0-2 NE	1	64	2	-	-	1	13	-	-	-	-
49	29	X	2	D	2 NW	1	-	-	-	-	-	3	-	-	-	-
50	29	F	8	M	1-3 ENE-N	1	65	4	-	3	-	4	-	1	-	2
TOTALS			299					39	17	61	14	24036	8	22	28	27

THE 1969 SPRING FIELD DAYS

JON DEVORE, *Editor*

Counts were submitted from thirteen different localities across the state, one of the thirteen being a high altitude count at Cosby. The total number of species seen was 184. This is far below the highest total ever recorded, 206 species seen on the 1967 Spring Counts.

INFORMATION OF THE COUNTS

MEMPHIS—27 April 1969; Count taken in locality of Shelby-Meeman Forest, approximately 20 mi. NE of Memphis; Overton Park, Riverside Park, DeSoto Park and foot of Illinois Avenue at Mississippi River front in Memphis. Also, "Coffey Grounds" in Memphis. About 20 members and guests participated. Weather fair, with temperature ranging from 60-65° F. Wind 10-20 mph. Birds very active after about three days of rain.
Alice Smith (compiler).

REELFOOT—Counts were taken in the same areas as the limits of the Christmas Count. No party went onto the lake. 26 April, 1969, 5:00 a.m. to 3:00 p.m. Weather clear with winds light and variable and temperatures ranging from 55-70° F.

The Black-billed Cuckoo was recorded by Ben Coffey. Eight observers in three parties.

Denny Buchannon, Ben Coffey, Lula Coffey, Mike Ford, Celia Hudson, Virginia Lamb, Janice Leggett, Kenneth Leggett (compiler).

SAVANNAH—Olive Hill to Savannah to Pickwick Lake. 4 May, 1969, 5:00 a.m. to 5:00 p.m. plus 9:00 to 9:30 p.m. Temperature 50-90° F. Little wind, some clouds in mid-morning. Four observers in one party. 12½ party hours and 60 party miles

Jerry Mathis, David E. Patterson (compiler), Mike Patterson, John Williams.

COLUMBIA—Same general area as Christmas Count, but larger, including Prium Springs. 12 noon 1 May to 12 noon 2 May. Clear, warm, dry. Temperature 40-80° F. Little wind. Five observers in two parties.

Delton Porter, Paul Porter, Evelyn Ridley, Campbell Ridley, George R. Mayfield, Jr. (compiler).

LEBANON—Wilson county, eight miles north of Lebanon, eight miles south, five miles west, and east. Mostly in yards of members of the Lebanon Chapter. 3 May 1969, early morning to late afternoon. Temperatures in the 70's; sunny day, gentle breeze.

Mr. and Mrs. D. Merritt, Mrs. Haney, Mrs. Edgar Waters, Mrs. Clyde Sellars, Mrs. Bryon Paul, Mr. Don Denny, Mr. Bill Sellars, Mrs. Bob Bain, Mrs. Aleen Easter, Mrs. William Welty, Mrs. Neal Welty, Mrs. W. Bone, Mrs. Louis Chambers, Miss Mary Wharton, Mrs. George Bouton, Mrs. Carter Farris, Mr. and Mrs. Cloy Couch, Dr. and Mrs. M. S. Howard, Mrs. S. Gilreath, Mrs. Roy K. Hobbs.

COOKEVILLE—26 April 1969, 5:30 a.m. to 6:00 p.m. Areas included were within 15 mile diameter circle of the town. Yard and garden space, open country, fields and woods, city lake area, were represented in the count. The area covered was the same as that we always use for our bird counts except that some areas were missed. The day was fair with sunshine the entire day; wind calm to 9 or 10 mph for short intervals· Temperature 50° early to 80° in mid-afternoon.

Miss Beulah Clark, Dr. and Mrs. J. O. Cummins, Caprice Haile, Mr. R. D. High, Mr. Roy T. Hinds, Mark and Morris Hunter, Amy Johnson, Annice Moore, Miser R. and Gordon H. Richmond, Mrs. Thelma Tinnon, Mr. F. R. Toline, Miss Marie White (compiler).

CHATTANOOGA—Same area as covered on the Christmas Counts plus additional areas to the north on Chickamauga Lake. 4 May 1969; 5:00 a.m. to 8:30 p.m. Weather excellent, sky almost clear, temperature range 50-80° F., wind calm to 7 mph.

Francis Barnwell, Ralph Bullard, Maxine Crownover, Jon E. DeVore (compiler), Kenneth Dubke, Roy Evenson, James Garrett, Benton Basham, Mike Lily, Howard and Mary Lou Meadors, Gladys C. Nelson, Mable Norman, Beulah Parks, Eugene and Eva Ranger, Veta Sliger, Roger Swanson, Mary Tunsberg, Jack and Mark Wagner, Mrs. H. B. Wilkinson.

KNOXVILLE—Selected areas from all of Knox County were included in the count, as in previous years. 27 April 1969. Partly cloudy, temperatures 47-82° F.

The Pigeon Hawk and Semipalmated Sandpiper were observed by James T. Tanner and Fred Alsop. The Ring-necked Pheasant was seen by Mrs. E. E. Overton, and the Yellow-crowned Night Herron by Tony Koella.

J. B. Owen (compiler).

COSBY—4 May 1969; 10:30 a.m. to 3:45 p.m. Cosby Recreation Area to Low Gap.

Richard Nevius (compiler).

Broad-winged Hawk (1), Yellow-shafted Flicker (2), Pileated Woodpecker (1), Red-bellied Woodpecker (1), Downy Woodpecker (4) Eastern Phoebe (2) Blue Jay (2), Common Crow (3), Tufted Titmouse (1), Winter Wren (2), Wood Thrush (5), White-eyed Vireo (1), Solitary Vireo (8), Red-eyed Vireo (8), Black-and-white Warbler (4), Yellow Warbler (1), Black-throated Blue Warbler (7), Black-throated Green Warbler (5), Ovenbird (16), Canada Warbler (5), Scarlet Tanager (7), Summer Tanager (5), Rose-breasted Grosbeak (10), Pine Siskin (1), American Goldfinch (2) Rufous-sided Towhee (1), Slate-colored Junco (12), Field Sparrow (1).

GREENEVILLE—The count was made 27 April 1969. Usual territory covered in Greene County. The sky was clear. Temperature 55-81° F.

Mr. and Mrs. Chester Darnell (compiler), Mrs. Willis Clemens, Mr. and Mrs. William Fischer, King Gaut, Robert Holt, Edmund Jeffers, Pat Jordan, Irvin Landmark, Bee McGuire, Mr. and Mrs. Richard Nevius, Dr. and Mrs. Royal B. Spees, Richard Sievert.

KINGSPORT—4 May 1969. Same area as in previous years.

Roy and Hattie Allen, William B. Hincke, Charlotte Finucane, Marie Brown, W. E. Gift, Lu Peck, Arthur Smith, Ann Switzer, Thomas Finucane (compiler).

JOHNSON CITY—The count represents the efforts of those participating in the field trips at the T.O.S. State Meeting at East Tennessee State University. The list includes results from both 10 May and 11 May 1969. The areas covered included Shady Valley, Roan Mountain, Unaka Mountain, Horse Cove, and ETSU campus. The weather for both 10 and 11 May was cooler than usual with temperatures ranging from the low 30's on Roan and Unaka Mountain on 11 May to the low 70's at lower elevations on both days. 10 May was clear to partly cloudy during the field trip period. 11 May was cloudy with occasional rain (freezing rain and sleet at higher elevations) during the field trip period. The field trips accented observations of species at high elevations, thus probably accounting for the relatively low number of species observed. Field trip leaders were: Fred Behrend, Bill Bridgforth, Jim Campbell, Wallace Coffey, Mrs. Harold Dillenbeck, Dr. and Mrs. Lee R. Herndon, and Charles R. Smith (compiler).

ELIZABETHTON—Most of Carter County was included on the count, along with adjacent parts of Johnson, Sullivan, Unicoi, and Washington Counties, to include Shady Valley; Boone, Patrick Henry, Watauga, and Wilbur Lakes; Roan Mountain (6285'); Unaka Mountain (4957'). 6:00 p.m. 3 May to 6:00 p.m. 4 May 1969. The weather was clear to partly cloudy for most of the count period with temperatures ranging from 42-80° F.

Fred Behrend, Bill Bridgforth, Wallace Coffey, Mrs. Harold Dillenbeck, Mrs. George Dove, Tim Hawk, Dr. and Mrs. Lee R. Herndon, Beth Lacy, Roby May, Pete Range, Charles R. Smith (compiler) Maxie and Tommy Swindell, Frank Ward.

ANNUAL SPRING FIELD DAYS, 1969

	Memphis	Reelfoot	Savannah	Columbia	Lebanon	Cookeville	Chattanooga	Knoxville	Greeneville	Kingsport	Johnson City	Elizabethton
Common Loon	--	--	--	--	--	--	--	--	--	--	--	2
Pied-billed Grebe	--	1	--	1	--	--	--	1	--	--	--	--
Great Blue Heron	--	1	--	2	--	--	--	1	2	1	1	--
Green Heron	--	2	1	2	1	1	7	15	1	4	3	4
Little Blue Heron	1	6	--	2	1	--	--	--	--	--	--	--
Common Egret	--	7	--	--	--	--	--	--	--	--	--	--
Bl.-cr. Night Heron	--	--	--	--	--	--	1	25	--	--	--	--
Yl.-cr. Night Heron	2	--	--	1	--	--	--	1	--	--	--	--
American Bittern	--	--	--	1	--	--	--	--	--	1	--	--
Canada Goose	--	--	--	--	18	--	2	--	--	--	--	--
Blue Goose	--	--	--	--	--	--	--	1	--	--	--	--
Mallard	--	200	--	21	130	--	5	--	4	5	--	8
Black Duck	--	--	--	1	20	--	--	1	--	--	--	--
Gr.-winged Teal	--	--	--	--	--	--	--	4	--	--	--	--
Bl.-winged Teal	--	14	--	7	--	--	--	3	20	2	--	2
Shoveler	--	1	--	--	--	--	--	--	--	--	--	--
Wood Duck	3	14	--	3	50	--	13	12	4	16	5	25
Lesser Scaup	--	--	--	1	--	--	--	1	--	--	--	2
Bufflehead	--	--	--	--	--	--	--	--	--	--	--	29
Hooded Merganser	--	1	--	--	--	--	--	--	--	--	--	--
Common Merganser	--	--	--	--	--	--	--	--	--	1	--	--
Turkey Vulture	1	--	6	8	2	1	23	7	3	1	12	9
Black Vulture	--	--	--	1	--	--	5	1	4	--	2	--
Mississippi Kite	1	--	--	--	--	--	--	--	--	--	--	--
Coopers Hawk	--	--	--	1	--	--	1	1	1	--	--	1
Red-tailed Hawk	--	--	1	2	--	1	11	3	1	--	1	4
Red-shld. Hawk	--	2	2	2	--	--	3	1	4	--	--	--
Br.-winged Hawk	--	3	--	--	--	1	3	12	2	--	4	11
Osprey	--	--	--	1	--	--	1	6	--	--	--	2
Pigeon Hawk	--	--	--	--	--	--	--	1	--	--	--	--
Sparrow Hawk	--	1	--	5	--	--	1	1	5	4	3	5
Ruffed Grouse	--	--	--	--	--	--	--	--	1	--	3	2
Bobwhite	1	4	24	28	9	14	56	146	30	42	18	43
Rng.-necked Phesant	--	--	--	--	--	--	--	1	2	--	--	1
King Rail	--	--	--	--	--	--	1	--	--	--	--	--
Sora	--	--	1	--	--	--	--	--	--	--	--	--
American Coot	--	49	--	11	12	1	1	--	--	--	--	--
Semipalmated Plover	--	1	--	--	--	--	1	--	--	1	--	1
Killdeer	--	5	8	18	2	--	19	43	13	6	7	13
American Woodcock	--	--	1	--	--	--	--	--	--	--	--	--
Common Snipe	--	--	--	--	1	--	--	10	31	--	--	1
Spotted Sandpiper	--	1	2	10	--	3	10	13	--	3	3	12
Solitary Sandpiper	--	1	2	3	--	--	7	34	3	10	3	15
Greater Yellowlegs	--	18	--	3	--	--	1	3	--	1	--	--
Lesser Yellowlegs	--	8	--	8	--	--	4	8	3	1	--	4
Pectoral Sandpiper	--	115	--	2	--	--	--	1	--	--	--	--
Least Sandpiper	--	--	2	17	--	--	5	3	--	4	---	4
Semipal. Sandpiper	--	--	--	2	--	--	--	1	--	--	--	--
Common Tern	--	2	--	--	--	--	--	--	--	--	--	--
Mourning Dove	11	16	51	58	21	92	166	486	56	111	47	55
Yl.-billed Cuckoo	--	--	3	1	2	1	6	1	--	--	2	1
Bl.-billed Cuckoo	--	1	--	--	--	--	--	--	1	--	1	--
Barn Owl	--	--	--	--	--	--	--	--	--	2	--	--
Screech Owl	--	--	--	--	--	--	1	1	1	1	3	2
Gr. Horned Owl	--	--	2	2	1	--	--	--	--	--	--	1
Barred Owl	--	2	--	4	--	--	--	--	--	--	--	--
Chuck-wills-widow	--	--	1	2	--	--	7	9	2	--	--	1
Whip-poor-will	--	--	11	21	--	--	9	6	2	--	3	21
Common Nighthawk	--	--	3	2	4	--	6	--	--	11	5	9
Chimney Swift	4	5	35	76	39	120	134	174	60	36	181	99
R.-thr. Hummingbird	14	2	3	1	1	2	1	3	4	2	1	4
Belted Kingfisher	--	1	2	4	1	--	6	18	2	4	8	19
Yl.-sh. Flicker	2	4	1	2	10	23	34	80	2	36	26	60
Pileated Woodpecker	2	--	5	5	--	5	6	22	3	6	8	7
Red-bel. Woodpecker	8	14	17	16	7	11	30	50	14	17	--	3

	Memphis	Reelfoot	Savannah	Columbia	Lebanon	Cookeville	Chattanooga	Knoxville	Greeneville	Kingsport	Johnson City	Elizabethton
Red-hd. Woodpecker	3	--	--	--	1	8	10	6	1	2	4	--
Yl.-bell. Sapsucker	--	--	--	--	1	1	--	--	1	--	--	1
Hairy Woodpecker	2	1	--	2	--	5	1	4	3	3	1	1
Downy Woodpecker	5	5	6	14	8	10	18	18	10	9	4	14
Eastern Kingbird	3	4	41	23	1-	5	27	22	1	2	15	22
Gr. Cr. Flycatcher	14	8	15	3	11	9	22	12	4	15	7	6
Eastern Phoebe	--	4	19	2	5	4	16	23	8	10	35	37
Acadian Flycatcher	3	--	21	6	--	--	2	--	12	4	35	10
Least Flycatcher	--	--	--	--	--	--	--	--	1	--	20	12
Ea. Wood Pewee	10	--	14	14	3	--	29	1	--	9	19	11
Ol.-sided Flycatcher	--	--	--	--	--	--	--	--	1	--	--	--
Horned Lark	--	4	1	6	--	2	4	13	1	16	3	--
Tree Swallow	--	5	--	3	--	--	--	5	--	--	3	2
Bank Swallow	--	--	--	--	--	--	--	--	--	--	1	--
Rgh.-winged Swallow	3	2	7	4	--	--	36	66	2	--	92	64
Barn Swallow	2	11	137	77	55	31	90	173	81	45	102	112
Cliff Swallow	--	--	100	--	8	--	140	3	--	--	1	--
Purple Martin	--	15	10	5	34	6	438	139	8	45	16	38
Blue Jay	29	19	39	64	91	134	207	401	81	101	64	400
Common Raven	--	--	--	--	--	--	--	--	--	--	3	2
Common Crow	1	13	22	65	20	45	66	209	50	79	73	112
Fish Crow	6	--	--	--	--	--	--	--	--	--	--	--
Carolina Chickadee	22	23	13	17	10	8	48	124	19	29	18	32
Tufted Titmouse	41	34	28	13	13	51	67	123	14	76	19	60
Wh.-br. Nuthatch	--	--	1	2	--	2	7	6	4	1	4	3
Rd.-br. Nuthatch	--	--	--	--	--	--	1	5	--	--	5	4
Br.-hd. Nuthatch	--	--	--	--	--	--	1	--	--	--	--	--
Brown Creeper	--	--	--	--	--	--	1	--	--	--	1	2
House Wren	1	--	--	--	--	4	--	2	5	13	2	19
Winter Wren	--	--	--	--	--	--	--	--	--	--	7	5
Bewick's Wren	--	--	1	1	5	2	--	3	4	1	--	--
Carolina Wren	42	13	11	13	1	9	46	151	16	45	16	42
Lg.-bld. Marsh Wren	--	--	--	--	--	--	--	1	--	--	--	--
Mockingbird	6	2	23	30	74	24	209	223	36	68	27	78
Catbird	2	--	15	10	13	21	27	18	5	15	44	71
Brown Thrasher	8	9	9	21	59	54	77	97	33	24	23	58
Robin	26	3	21	11	58	70	203	292	67	117	239	173
Wood Thrush	34	3	45	12	16	18	78	110	21	40	80	93
Hermit Thrush	--	--	--	--	--	--	1	2	1	--	--	1
Swainson's Thrush	27	1	1	2	--	--	--	14	--	4	1	1
Gr.-cheeked Thrush	9	--	--	--	--	--	1	1	--	--	--	--
Veery	5	--	--	4	--	--	3	1	--	--	28	3
Eastern Bluebird	2	6	7	12	27	12	43	43	3	5	16	23
Bl.-gr. Gnatcatcher	35	74	46	32	--	2	13	116	17	11	5	10
Gol.-cr. Kinglet	--	--	--	--	--	--	--	--	--	--	9	2
Ruby-cr. Kinglet	5	--	--	--	--	--	--	36	5	--	--	1
Cedar Waxwing	--	--	2	--	--	3	28	43	2	--	54	39
Log.-hd. Shrike	1	2	2	10	2	--	7	8	2	--	3	2
Starling	18	C	67	250	230	123	1025	854	296	78	126	755
Wh.-eyed Vireo	68	53	37	12	1	20	18	25	6	31	4	20
Yl.-thr. Vireo	8	5	2	2	--	--	2	18	--	7	3	--
Solitary Vireo	--	--	--	--	--	--	--	1	8	--	9	8
Red-eyed Vireo	31	20	10	6	--	5	25	83	41	33	74	79
Philadelphia Vireo	--	--	1	--	--	--	1	--	--	--	--	--
Warbling Vireo	1	1	--	--	--	--	--	--	--	--	1	3
Bl. and wh. Warbler	1	2	8	3	2	--	8	20	13	13	50	31
Prothonotary Warbler	48	20	11	2	--	--	5	2	2	3	--	--
Swainson's Warbler	3	1	--	--	--	--	--	--	1	--	6	--
Worm-eating Warbler	--	--	11	2	--	2	--	6	7	15	4	4
Gol.-winged Warbler	--	2	--	--	--	--	1	1	--	--	--	4
Bl.-winged Warbler	1	1	21	12	--	--	--	4	--	--	--	4
Tennessee Warbler	14	7	5	6	--	--	1	5	--	4	2	--
Nashville Warbler	9	--	--	6	--	--	--	7	--	--	--	--
Parula Warbler	14	23	--	2	--	--	--	--	3	2	18	12
Yellow Warbler	1	3	2	8	--	3	1	33	14	38	54	44
Magnolia Warbler	--	--	--	--	--	--	--	--	--	--	1	--
Cape May Warbler	--	--	--	--	--	--	17	4	--	4	--	1
Bl.-thr. Blue Warbler	--	--	--	--	--	--	--	--	8	--	31	49
Myrtle Warbler	12	16	--	2	--	4	24	207	19	8	3	15
Bl.-thr. Gr. Warbler	1	1	1	--	--	--	--	9	5	5	34	15

	Memphis	Reelfoot	Savannah	Columbia	Lebanon	Cookeville	Chattanooga	Knoxville	Greeneville	Kingsport	Johnson City	Elizabethton
Cerulean Warbler	14	6	4	6	--	--	--	9	--	3	--	--
Blackburnian Warbler	1	--	--	1	--	--	--	4	--	5	3	--
Yl.-thr. Warbler	1	3	--	3	--	--	3	1	1	3	2	2
Ches.-sided Warbler	2	--	--	2	--	1	--	3	--	3	37	52
Bay-br. Warbler	--	--	--	--	--	--	1	--	--	2	--	--
Blackpoll Warbler	8	2	14	10	1	--	37	10	--	1	5	5
Pine Warbler	--	--	7	--	--	4	1	1	3	--	2	--
Prairie Warbler	1	1	15	8	--	--	9	34	7	11	--	1
Palm Warbler	--	--	--	35	1	--	6	25	10	1	1	3
Ovenbird	4	--	7	4	--	--	7	30	22	30	50	54
North. Waterthrush	--	--	2	2	--	--	--	--	--	--	1	--
La. Waterthrush	2	--	1	6	--	--	7	6	6	6	27	32
Kentucky Warbler	24	19	16	8	--	--	4	26	--	20	11	10
Connecticut Warbler	--	--	--	--	1	--	--	--	--	--	--	--
Yellowthroat	1	40	57	18	2	18	46	122	18	36	24	44
Yl.-br. Chat	4	8	41	9	--	22	31	14	7	19	7	19
Hooded Warbler	10	--	11	6	--	--	5	25	5	27	17	22
Canada Warbler	2	--	1	--	--	--	1	2	11	--	17	14
American Redstart	6	--	1	2	--	--	2	5	--	2	6	7
House Sparrow	--	C	50	40	67	40	189	135	47	25	160	236
Bobolink	--	12	4	--	--	--	8	4	--	--	4	10
Eastern.Meadowlark	3	17	102	95	54	148	133	499	106	92	125	155
Rd.-wgd. Blackbird	1	C	124	314	--	55	235	739	46	103	182	158
Orchard Oriole	6	9	17	14	13	3	13	34	5	14	13	12
Baltimore Oriole	23	6	1	--	1	--	2	3	--	7	16	7
Common Grackle	39	30	129	850	223	172	398	996	366	148	226	593
Br.-hd. Cowbird	56	40	42	120	20	23	121	275	6	34	66	99
Scarlet Tanager	7	1	3	3	--	--	16	13	5	22	46	40
Summer Tanager	32	10	22	14	3	10	27	32	7	21	3	2
Cardinal	49	66	45	70	156	84	192	452	71	128	41	143
Rose-br. Grosbeak	6	3	3	8	--	2	4	13	6	12	53	20
Blue Grosbeak	1	--	15	2	--	--	12	1	1	--	--	1
Indigo Bunting	43	39	120	39	16	14	87	19	7	31	54	27
Dickcissel	--	42	41	--	--	--	--	--	--	--	--	--
Evening Grosbeak'	--	--	--	--	--	--	2	6	78	--	30	47
Purple Finch	7	--	--	--	--	10	--	31	14	12	3	1
Pine Siskin	--	4	--	--	--	--	--	1	2	--	59	1
American Goldfinch	29	112	68	21	3	47	114	608	66	39	119	141
Rufous-sided Towhee	10	4	22	29	29	51	130	208	39	49	77	106
Savannah Sparrow	--	1	14	4	--	--	13	2	--	--	--	--
Grasshopper Sparrow	--	--	12	1	--	--	12	4	--	3	--	9
Vesper Sparrow	--	--	--	--	--	--	--	--	--	--	3	6
Sl.-colored Junco	--	--	--	--	12	--	--	--	2	--	81	62
Chipping Sparrow	16	5	25	8	--	17	38	33	20	16	49	68
Field Sparrow	--	9	9	15	16	26	62	170	23	37	32	75
Wh.-cr. Sparrow	--	5	3	23	14	--	--	5	25	2	3	10
Wh.-thr. Sparrow	89	29	21	22	--	37	15	284	29	26	8	33
Lincoln's Sparrow	--	--	3	1	--	--	--	--	--	--	--	--
Swamp Sparrow	--	2	--	6	--	--	3	8	6	--	--	1
Song Sparrow	--	--	--	--	4	12	61	220	25	60	64	145
TOTAL SPECIES	**86**	**101**	**100**	**120**	**65**	**67**	**119**	**139**	**110**	**103**	**119**	**129**

T. O. S. STATE MEETING, 1969

BY HELEN B. DINKELSPIEL, *Secretary*

ANNUAL BOARD OF DIRECTORS' MEETING

The 54th Annual Meeting of the Board of Directors of the Tennessee Ornithological Society was held at 1:30 p.m. on 10 May 1969 at East Tennessee State University at Johnson City, Tennessee.

The meeting was called to order by Chairman of the Board, Robert W. McGowan, with thirty officers, directors, and proxies present.

Mr. McGowan asked if there were any corrections to the minutes as printed in the June 1968 issue of *The Migrant*. There being no corrections or additions the minutes were approved as printed.

Treasurer: Copies of the Treasurer's report were distributed to the officers and directors present. A brief summary of Miss Annella Creech's report follows:

Balance on hand 1 May, 1968	$1943.19
Income from all sources	2151.42
	4094.61
Disbursements	2276.10
Net Balance on hand	1818.51

Endowment Fund—333 M.I.T. Certificates on hand @ $16.46—$5481.18.

A motion was made by Mr. Henry Parmer to approve the Treasurer's report. The motion was seconded and carried. A copy of the Treasurer's report is attached to the minutes.

The Migrant: Mrs. Kirby Stringer made a motion to thank Mr. Kenneth Dubke for volunteering assistance to take care of the envelopes to see that they are addressed and mailed to Dr. Herndon for mailing. The motion was seconded and carried.

Curator: Mr. Albert Ganier reported that he is keeping back issues of *The Migrant* for those needing them. Mr. Ganier also stated that they would like to have additional articles for *The Migrant,* and that "Round Table" notes are needed.

Audit Report: Mr. Henry Parmer, Chairman of the Finance Committee, reported no irregularities in the books and records of the Treasurer, and that the records maintained appeared to be complete and proper, and adequate for our needs. Copy of Audit Report attached to the minutes.

Finance Committee: Mr. Kenneth Leggett made a motion to accept the report of the Finance Committee. The motion was seconded and carried. Copy of the Report of the Finance Committee is attached to the minutes.

Nominating Committee: Mrs. W. F. Bell, Chairman, through Miss Mary Davant, submitted the following slate of officers:

Vice-pres. East Tenn.	Mr. Fred Alsop — Knoxville
Vice-pres. Middle Tenn.	Mr. John Ellis — Nashville
Vice-pres. West Tenn.	Mrs. Edw. Carpenter — Henderson

Secretary ... Dr. Dan Gray, Jr. — Columbia
Treasurer ... Mr. Kenneth Dubke — Chattanooga
Dir.-at-Large East Tenn. ... Miss Louise Nunnally — Knoxville
Dir.-at-Large Middle Tenn. ... Mr. Kenneth Bunting — Nashville
Dir.-at-Large West Tenn. ... Mr. Kenneth Leggett — Dyersburg
Editor ... Dr. Lee R. Herndon — Elizabethton
Curator ... Mr. Albert Ganier — Nashville

There being no further nominations from the floor, Mrs. Kirby Stringer made a motion to approve the nominations for presentation to the Membership. The motion was seconded and carried.

New Business: Mr. Robert McGowan read a letter from Mr. Willard N. Gray, President of Kentucky Ornithological Society, stating that "The Executive Committee of the Kentucky Ornithological Society, at its fall meeting, went on record as favoring a joint meeting with the Tennessee Ornithological Society in the spring of 1970.

Mr. John Ellis made a motion that Dr. George Mayfield appoint a committee of three, with members of the committee to come from each section of the state, to look into the matter of meeting with the Kentucky Ornithological Society before any commitment is made, and then brought to the body for discussion, through the president. The motion was seconded. The motion by Mr. Ellis was unanimously defeated.

Mr. Charles Smith moved that the Board of Directors formulate a Recommendation to the host chapter and the President-Elect that we are in favor of a joint meeting with Kentucky Ornithological Society, and if this is feasible with the host chapter, then we will work out a joint meeting for next year. The motion was seconded and carried with 21 in favor and 0 opposed.

Dr. George Mayfield presented a slate for a new Finance Committee: Messrs. Benton Basham, John DeVore, Kenneth Leggett and Miss Annella Creech. Mrs. Herndon made a motion for acceptance. The motion was seconded and carried.

There being no further business the meeting adjourned.

ANNUAL BUSINESS MEETING—10 May 1969

The Annual Business Meeting of the Tennessee Ornithological Society was held in the Ball Room of East Tennessee State University, Johnson City, Tennessee, on 10 May 1969, with President Robert W. McGowan presiding.

Following the Banquet Dr. Delos P. Culp, President of East Tennessee State University, welcomed the members of T.O.S. and guests.

Mr. John Wallace Coffey introduced the guest speaker, Mr. Larry L. Hood, Biologist, U. S. Fish and Wildlife Service, who spoke on the history and mechanics of bird banding. In his introductory message Mr. Coffey paid particular tribute to Mr. Ben B. Coffey, Jr., and to Mrs. Amelia Laskey for their contributions to ornithology, with special reference to their accomplishments in the field of bird banding.

Mr. McGowan expressed thanks to the Elizabethton, Bristol and Greeneville Chapters for their joint hosting of this meeting.

A special welcome was extended to founders Mr. Albert Ganier and Mr. Dixon Merritt, and to Mrs. George Mayfield, Sr., wife of a founder, and mother of President-elect, Dr. George Mayfield, Jr.

Dr. Lee R. Herndon and Mr. Albert Ganier were recognized by Mr. McGowan as two former presidents of Tennessee Ornithological Society present.

A Roll Call by chapters showed 108 in attendance.

Dr. James Tanner made a motion to dispense with the reading of the minutes. The motion was seconded and carried.

Miss Annella Creech, Treasurer, announced that copies of the Treasurer's report were on hand and available to the membership. Following her report, Mr. Henry Dinkelspiel made a motion to accept the Treasurer's report as read. The motion was seconded and carried.

Dr. Katherine Goodpasture, State Coordinator for the U. S. Fish and Wildlife Cooperative Breeding Bird Survey, gave a report on the results from the survey for 1968 for Tennessee, in which 42 groups participated and for which 109 species were reported.

Miss Mary Davant, Chairman of the Resolutions Committee read Resolutions of thanks to the three host chapters, to East Tennessee State University for use of its facilities, to members of the various committees responsible for the success of the meeting, and to those participating in the paper session. Mr. Charles Smith made a motion to approve the Resolutions. The motion was seconded and carried. Copy of the Resolutions is attached to the minutes.

Miss Mary Davant, acting for Mrs. William Bell, Chairman of the Nominating Committee, submitted the slate of officers for 1969-1971.

There being no nominations from the floor Mr. Fred Behrend made a motion to accept the slate as read. The motion was seconded and carried.

The Coordinator of Conservation Activities, Mr. Mack Prichard, reported on the urgent need for state wilderness areas, pollution control, better protection for raptors and all bird species, and the need for affiliation with National Audubon Society for their experience and contacts in these fields. He suggested the appointment of a Conservation Committee to pursue these matters.

At the request of Mrs. Joe Moss, Shoulder Patch Chairman, Mr. McGowan read her report which showed sales of shoulder patches and check lists in the amount of $53.05.

Mr. McGowan read a letter received from Mr. Willard N. Gray, President of Kentucky Ornithological Society, in which Mr. Gray stated that the Executive Committee of the Kentucky Ornithological Society favored a joint meeting with the Tennessee Ornithological Society in the spring of 1970. The membership was then advised of the Recommendation of the Board of Directors of T.O.S. "to the host chapter and President-elect, that we are in favor of a joint meeting with K.O.S. and if this is feasible with the host chapter then we will work out a joint meeting for next year." Mr. Bill Bridgeforth made a motion to accept the recommendation of the Board of Directors. The motion was seconded and carried.

An invitation was extended to the members of T.O.S. by the Memphis Chapter, who will host the annual meeting for 1970, for West Tennessee.

Dr. Mayfield, President-elect, made an appeal for unity in matters of organization. Dr. Mayfield suggested a committee for self-study plans and for plans for the future of T.O.S., the committee to include: Mrs. Ben B. Coffey, Jr., Wallace Coffey, Richard Nevius, Dr. James Tanner, James Campbell, John Ellis, Henry Parmer, Kenneth Leggett and Kenneth Dubke.

There being no further business the meeting adjourned.

RESOLUTIONS

The Tennessee Ornithological Society assembled in its 54th Annual Meeting, 9-11 May 1969, at Johnson City, Tennessee resolves that an expression of appreciation for the planning and execution of a successful meeting be extended:

To the host Chapters, Bristol, Elizabethton, and Greeneville, and each of their members;

To the East Tennessee State University for use of its facilities, and to Dr. John Bailey for his sponsorship of the meeting;

To the Greeneville Chapter of the Tennessee Ornithological Society and to Mr. Jim Bailey, of the Tennessee Conservation Department, for the reception and cordial welcome on Friday evening;

To Mrs. Wallace Coffey and Mr. C. T. Ottenfeld for registration;

To Mr. Fred Behrend and Mrs. Kathryn Jones for publicity;

To Mrs. George N. Dove, Mrs. Harold Dillenbeck and all who assisted in arrangements for a successful banquet;

To Mrs. A. E. Reynolds and Mr. Guy Arnold for the lovely banquet decorations;

To Mr. Charles R. Smith, his Committee and the group leaders for the exciting field trips which we enjoyed;

Resolved that appreciation be expressed:

To all who were responsible for the direction and coordination of the paper sessions, with special thanks to the speakers of this session: Mr. Fred Alsop, Mr. Fred Behrend, Mr· Gary Wallace and Mr. Ken Dubke for the papers read.

Be it further resolved that our thanks be extended:

To Mr. Wallace Coffey, Vice-president for East Tennessee, for his guidance of a splendid meeting, and to each of the other officers of T.O.S. who have served so efficiently during their terms of office.

Respectfully submitted, Mary Davant, Alice Smith, Ella H. Ragland.

Tennessee Ornithological Society
Treasurer's Report May 1968 - May 1969

Memberships	Paid 1968	Paid 1969	Unpaid 1969	Indi-vidual	Family	Sus-tain	Stu-dent	Life	Collected
Bristol	31	29	1	15	14				$ 101.00
Chattanooga	29	31	8	15	7		7	2	99.50
Upper Cumberland	21	21		16	5				68.00
Elizabethton	16	14	3	8	3		2	1	45.00
Greeneville	10	7	1	1	6				27.00
Kentucky Lake	6		6						13.00
Knoxville	82	95	2	42	28		21	4	261.50
Lebanon	23	30	1	18	9		2	1	99.50
Memphis	64	64	12	44	11		6	3	187.00
Nashville	139	144	22	79	46	4	4	11	490.00
Reelfoot	17	19	5	12	5		2		58.00
Tenn-at-Large	36	32	8	18	7	2	3	2	98.00
Corresponding	63	63	7	52	1	1	3	6	206.50
	537	549	76	320	142	7	50	30	$ 1754.50
Subscriptions: Libraries and Museums (39 paid, 6 unpaid)									115.00
									$ 1869.50

Other Income		
M.I.T. Dividends	$144.82	
Check Lists and Books	23.05	
Shoulder Patches	27.50	
Back Issues THE MIGRANT	70.45	
Reprints	10.35	
Refund, Postage Deposit	5.75	
		281.92
TOTAL INCOME FROM ALL SOURCES		$ 2151.42

Disbursements		
THE MIGRANT: Printing	$1400.21	
Editor's Expense	175.11	
Zinc Etchings, Half-tones	127.32	
Mailing	218.08	
Envelopes	76.80	
Reprints, Binder Inserts	57.36	
Printing, Envelopes	73.06	
Postage	39.00	
Shoulder Patches	104.75	
Miscellaneous	4.41	
TOTAL DISBURSED		$ 2276.10

Balance on Hand May 1, 1968	$1943.19
Income Itemized Above	$2151.42
Total	4094.61
Disbursements Itemized Above	2276.10
NET BALANCE ON HAND	$ 1818.51

ENDOWMENT FUND - 333 M.I.T. Certificates on Hand @ $ 16.46 -- $5,481.18

Annella Creech, Treasurer

May 3, 1969

PRESIDENTIAL MESSAGE TO T.O.S.

It is with a feeling of great challenge that I begin my service to you as president of the Tennessee Ornithological Society. I believe the time has come to seek ways for enhancing the effectiveness of our society in its principal activity of bird study and in the broader realms of conservation, and to provide if possible increased benefits to the membership. At a time when all of us are involved in many activities, this is indeed a difficult set of objectives, especially since they must be accomplished without compromising the rich heritage passed on to us by the founders and active members of the past. It is certain that only a group of knowledgeable, energetic and representative members of our society can bring this about, so for this purpose I have initiated a committee for Self-Study and Future Plans. To this committee I have appointed the following members: Lula Coffey, Ken Leggett, Henry Parmer, John Ellis, Ken Dubke, Jim Campbell, Jim Tanner, Richard Nevius, and Wallace Coffey, as chairman. I urge each of the members of the society to communicate to any member of this committee their ideas and any problems which they feel should be studied with a view toward improving our society. Of course this committee's recommendations are subject to the approval of the Board of Directors and shall work in close coordination with the officers of the society. I have already received a number of good suggestions and shall pass them on to the committee for their study. I hope we can have our first meeting this fall at Watts Bar.

Despite a busy weekly schedule, it is my intention to try to visit the various chapters of the T.O.S., upon invitation whenever possible, either for meetings or field trips. I shall be glad to hear from the officers of the chapters in this regard, and from any member who wishes to bring any matter to my attention.

I want to urge all of you, who can, to attend the meeting and seminar, soon to be announced, at Watts Bar Resort this fall. The possible joint meeting with the Kentucky Ornithological Society next spring is still under study at this time. This message would not be complete without mentioning, to those who could not attend, how excellent and well organized was the recent Annual Spring Meeting in Johnson City. The various members of the local arrangements committee are to be commended for their work in providing another outstanding meeting with several helpful innovations.

George R. Mayfield, Jr.

THE SEASON

Charles R. Smith, *Editor*

The months of February, March, and April were rather unstable with respect to the weather across the state. Temperatures for February averaged 3-4° colder than usual across most of the state, with precipitation for that month about average. March experienced more extreme variations from normal weather patterns. For March, temperatures were 7-8° colder than normal and precipitation was 2-3 inches below the average for that month. April offered some relief, with temperatures about average and precipitation only 1-3 inches above average.

From 15-17 February, snow prevailed across the state, with as much as ten inches accumulating in some of the more mountainous regions. Snowfall had generally ceased by the middle of March. The heaviest snowfall for March was 7-9 inches recorded at Watauga Dam and Mountain City in Upper East Tennessee on 1 March. There were heavy rains throughout the state on 10-15 April.

The information which is available indicates a general scarcity of waterfowl across the state for this period. Records of birds of prey, however, were more numerous, especially from the middle and eastern portions of the state. Evening Grosbeaks were reported from all regions. Pine Siskins and Purple Finches were less numerous and no crossbills were reported. The influx of northern finches this season was not outstanding. The colder weather in March might account, in part, for the somewhat later migration, noted especially in the central portions of the state.

Especially notable for this period is the observation of the Black-headed Grosbeak near Sevierville, in East Tennessee. This constitutes another addition to the growing list of Tennessee birds. Other notable records are as follows: Common Egret at Nashville, White-winged Scoter on Watauga Lake, Rough-legged Hawk near Roan Mountain, Pigeon Hawk near Roan Mountain, Peregrine Falcon near Bristol, Willet at Nashville, Least Tern at Nashville, Eastern Kingbird wintering at Norris, Brown-headed Nuthatch at Collegedale, Connecticut Warbler at Nashville, Brewer's Blackbird near Kingsport, and Harris' Sparrow at Greeneville. Details of the above observations may be found in the reports for each region which follow.

CORRECTION

In *The Migrant*, Vol. 39, page 90, of "The Season", "Eastern Kingbird: 7, 8, 10 Oct. (2) WB (HB)." (line 27) should read *Western* Kingbird: 7, 8, 10 Oct. (2) WB (HB). Because of the importance of this record, special attention should be given to making this correction in your copy of *The Migrant.*

WESTERN COASTAL PLAIN REGION—*Herons-Vireos:* Green Heron: 4 Apr. (1) S. Little Blue Heron: 29 Mar. (4) R. Common Egret: 20 Mar. (3) D. Redhead: 15 Mar. (17) D. Sharp-shinned Hawk: 15 Mar. (5) R. Cooper's Hawk: 20 Mar. (1) S, 23 Mar. R. Broad-winged Hawk: 3 Mar. (1) S, 5 Apr. (1) R. Bald Eagle: 15 Mar. (14) R. Osprey: 5 Apr (1) R. Golden Plover: 22 Mar. (13) S. Lesser Yellowlegs: 15 Mar. (2) R, 25 Apr. (5) S. Pectoral Sandpiper: 15 Mar. (20) R. Least Sandpiper: 15 Mar. (5) R. Herring Gull: 1 Mar. (1) S. Whip-poor-will: 2 Apr. (4) S. Great Crested Flycatcher: 17 Apr. (1) S. Eastern Wood Pewee: 5 Apr. (1) S. Horned Lark: 16 Feb. (343) R, numerous all winter there. Rough-winged Swallow: 22 Mar. (1) S. Cliff Swallow: 17 Apr. (40 nests) S. Wood Thrush: 1 Apr. (1) S. Water Pipit: 23 Mar. (3) R. Yellow-throated Vireo: 8 Apr. (1) S. Solitary Vireo: 15 Apr. (1) S.

Warblers: Worm-eating: 10 Apr. (1) S. Pine: 8 Mar. (1) S. Prairie: 8 Apr. (2) S. Palm: 2 Apr. (1) S. Ovenbird: 10 Apr. (1) S. Hooded: 8 Apr. (1) S. Canada: 28 Apr. (1) S.

Oriole-Sparrows: Orchard Oriole: 10 Apr. (1) S. Scarlet Tanager: 15 Apr. (1) S. Summer Tanager: 10 Apr. (1) S. Evening Grosbeak: 27 Mar. (13) first S record. Savannah Sparrow: 22 Mar. (35) R. Fox Sparrow: 15 Mar. (5) D.

Locations: D—Dyersburg, R—Reelfoot Lake, S—Savannah.

Observers: Kenneth and Janice Leggett at Dyersburg and Reelfoot, David and Mike Patterson at Savannah.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Loons-Geese:* Common Loon: 1 Apr. (5), 2 Apr. (1) LD (RTH). Horned Grebe: 22 Mar. (12) WR (MCW), 16 Apr. (5) OHL (LOT). Pied-billed Grebe: 31 Mar. (13) OHL (MCW). Great Blue Heron: continued scarce. Green Heron: 8 Apr. (1) WC (MCW). Common Egret: 26 Apr. (5) ACM (AFG). Black-crowned Night Heron: 26 Apr. (63) BH (JP). Yellow-crowned Night Heron: 26 Apr. (4) BH (JP). American Bittern: 9 Apr. (1) WC (MCW). Canada Goose: 1 Feb. (75) RH (JSH), 19 Apr. (3) PPL (LOT).

Ducks: Mallard: very scarce NA, 26 Apr. (2) BV (JP), very late and at the site of a 1968 nesting. Black: scarce after mid Jan. as were all ducks. Blue-winged Teal: 30 Mar. (10) RR, NA (HEP), 26 Apr. (49) ACM (AFG). American Widgeon: 13 Mar. (4) BL (HEP), 15 Mar. (50) ACM (HCM, HEP), 30 Mar. (4) RL (MCW), only reports. Wood Duck: several pairs NA later part March, 24 Apr. (16) RL (MCW). Redhead: 11 Mar. (10) males BL (HEP); 26 Apr. (1) RL (MCW), 5 days latest ever NA. Ring-necked: continued far below normal; 26 Mar. (75) BL (HEP), only large flock there; 22 Apr. (1) RL (MCW) last, with (5-40) during period. Canvasback: 5 Feb. (2) RL (MCW) only report. Lesser Scaup; 30 Mar. (50) ACM (HEP), 26 Apr. (38) RL (MCW); none BL. Common Goldeneye: 1 Apr. (2) RL (MCW) Bufflehead: 22 Mar. (8) WR (MCW), 31 Mar. (2) CL (MCW), Hooded Merganser: 20 Feb. (1) OHL (HEP), 16 Apr. (2) OHL (LOT).

Hawks-Terns: Sharp-shinned Hawk: 15 Apr. (1) BY (RH). Broad-winged Hawk: 4 Apr. (1) BS (KAG), and 12 Apr. (1) LD (RTH). Golden Eagle: 8 Feb. (2) WB (MCW). Marsh Hawk: 23 Mar. (1) WC (MCW), 6 Apr. (1) BS (HEP, HCM). Osprey: 20 Apr. (1) each RL and TJ (HCM, HEP), 26 Apr. (3) ACM area (AFG), (1) seen 8 times between 7, 24 Apr. LD (RTH). Sandhill Crane: 5 Mar. (56), 14 Mar. (51) BY (RH). American Coot: count RL down to (7) 26 Apr.; 19 Apr. (75) OHL (LOT). (MCW). American Woodcock: 22 Feb. to 7 Mar. 1-3) OCR (KAG), 28 Feb. (1) H (HCM), 25 Apr. (1) LD (RTH). Common Snipe: 15 Mar. (4) ACM (HCM, HEP), 29 Mar. (7) TJ (HCM, HEP), 26 Apr. (1) BV (JP). Willet: 26

April (33) ACM (AFG). Greater Yellowlegs: 26 Apr. (13) BV (JP). Lesser Yellowlegs: maximum numbers (3) on 26 Apr. ACM (AFG). Pectoral Sandpiper: scarce, with (7) 6 Apr. WB (MCW) being largest flock. Bonaparte's Gull: 2 Feb. (9) (LOT, HCM, HEP) to 22 Apr. (2) (LOT), both OHL. Least Tern: 30 Mar. (1) RR (HEP), a very rare NA visitor, and a very early date for the State.

Dove-Swallows: Mourning Dove: 4 Mar. (1) on nest, 29 Mar. (2) young fledged, both H (HCM). Yellow-billed Cuckoo: 26 Apr. (1) Black-billed Cuckoo: 26 Apr. (1) TJ (HEP). Great Horned Owl: 3 Apr. (1) LD (RTH). Whip-poor-will: 10 April (1) LD (RTH), 11 Apr. (1) BS (KAG). Common Nighthawk: 23 Apr. (1) H (HCM). Chimney Swift: first 1 Apr. (1) H (HCM), 3 Apr. (1) WB (MCW), then scarce until 10 April (60) H (HCM). Ruby-throated Hummingbird: 13 Apr. (1) H (Mrs. W. R. Young). Yellow-bellied Sapsucker: scarce in April, last being (1) 28 Apr. H (HCM). Eastern Kingbird: first, 12 Apr. (1) WB (MCW). Great Crested Flycatcher: 25 Apr. (1) LD (RTH). Eastern Phoebe: first 2 Mar. (6), 21 Mar. BY (3) (RH). Acadian Flycatcher: 26 Apr. (6) NA. Wood Pewee: 26 Apr. (6) NA (TOS). Tree Swallow: 30 Mar. (3) ACM (HEP), 22 Apr. (100+) RL (MCW). Bank Swallow: 19 Apr. (2) RR-NA (HCM, HEP). Rough-winged Swallow: 30 Mar. (3) ACM (HEP), then 22 Apr. (50) RL (MCW). Barn Swallow: 28 Mar. (2) MBP (MCW), 30 Mar. (50) ACM (HEP); first at BY (5) 4 Apr. (RH). Cliff Swallow: 30 Mar. (8) ACM (HEP). Purple Martin: 28 Feb. (1) WB first Mid-Tenn. record in many years for Feb.

Nuthatches-Pipit: Red-breasted Nuthatch: fairly common NA, with last report being 26 Apr. (1) (HCM) and (1) (KAG), (2) (HEP). Brown Creeper: last, 10 Apr. (1) H (HCM). House Wren: four records NA during Apr. Winter Wren: NA, 30 Mar. (3), 31 Mar. (8), 1 Apr. (7), all RL (MCW). Bewick's Wren: a few singles NA. Carolina Wren: well below normal NA. Catbird: 8 Apr. (1) H (KAG). Brown Thrasher: (1) wintered H (AT). Wood Thrush: 12 Apr. (1) LD (RTH). Hermit Thrush: 8 Apr. (1) H (HCM). Swainson's Thrush: 26 Apr. (6) NA (TOS). Gray-cheeked Thrush: 26 Apr. (1) NA (HEP). Veery: 29 Apr. (1) (SB). Eastern Bluebird: still fairly scarce NA. Blue-gray Gnatcatcher: 2 Apr. (7) SHV (KAG), (1) H (HCM), and (1) LD (RTH); 4 Apr. (10) BY (RH). Golden-crowned Kinglet: 31 Mar. (25) RL (MCW), 3 Apr. (2) LD (RTH) Ruby-crowned Kinglet: 26 Apr. (11) (TOS); 27 Apr. (1) H (KAG). Water Pipit: 8 Mar. (9) WB (FB), 29 Mar. (2) TJ (HCM, HEP).

Vireos: White-eyed: 10 Apr. (1) BS (KAG), and (1) LD (RTH), 15 Apr. (4) RL (MCW). Yellow-throated: 4 Apr. (1) BS (KAG). Solitary: 19 Apr. to 12 May (1) H (HCM). Red-eyed: 10 Apr. (1) LD (RTH), 12 Apr. (1) BS (KAG). Warbling: 13 Apr. (1) LD (RTH) to 26 Apr. (5) NA (TOS).

Warblers: Black-and-white: 28 Mar. (3) MBP (MCW), 5 Apr. (2) BS (KAG), 9 Apr. (1) LD (RTH). Prothonotary: 9 Apr. (4) RL (MCW), 26 Apr. (33) NA (TOS). Worm-eating: 16 Apr. (1) BS (KAG), 26 Apr. (2) LD (RTH) and NA (7) (TOS). Golden-winged: 28 Apr. (1) H (KAG). Blue-winged: 12 Apr. (1) BS (KAG), 14 Apr. (7) RL (MCW), 26 Apr. (30) NA (TOS). Tennessee: 20 Apr. (1) (MCW) TR, 26 Apr. (9) NA (TOS). Nashville: 29 Apr. (1) H (HCM). Parula: 26 Apr. (7) NA

(TOS). Yellow: 13 Apr. (1) LD (RTH), 15 Apr. (1) H (HCM). Black-throated Blue: 12 Apr. (1) LD (RTH). Myrtle: very scarce until migration in late April. Black-throated Green: 26 Apr. (1) RL (MCW), 28 Apr. (1) H (HCM). Cerulean: 19 Apr. (2) AC (HCM). Blackburnian: 26 Apr. (2) TJ (JP). Yellow-throated: 4 Apr. (1) SHV (KAG). Chestnut-sided: 26 Apr. (1) TJ (JP). Blackpoll: 26 Apr. (2) H (HCM, KAG). Prairie: 21 Apr. (1) H (AT), 27 Apr. (20) and 28 Apr. (23) both H (HCM). Ovenbird: 26 Apr. (2) SHV (HCM). Louisiana Waterthrush: first 23 Mar. (1) BS (KAG) and FV (JOE). Kentucky: 14 Apr. (1) RL (MCW) to 26 Apr. (46) NA (TOS). Connecticut: 28 Apr. (1) RL (AT), 7 days earliest ever NA and first there in three years. Yellowthroat: 16 Apr. (1) CP (HCM) and (1) BS (KAG), 17 Apr. (1) LD (RTH) Yellow-breasted Chat: 23 Apr. (1) LD (RTH). Hooded: 16 Apr. (1) H (HCM). Redstart: 13 Apr. (1) BS (KAG).

Bobolinks-Tanagers: Bobolink: 26 Apr. (25) ACM (AFG party). Red-winged Blackbird: 1 Mar. (500) WB (MCW), a migrating flock. Orchard Oriole: 15 Apr. (1) H (FM), 16 Apr. (2) H (HCM) and (1) H (HH), 17 Apr. (1) LD (RTH). Baltimore Oriole: 26 Apr. (14) NA. Common Grackle: plentiful NA during nesting time. Brown-headed Cowbird: fairly common in April NA. Scarlet Tanager: 16 Apr. (1) BS (KAG), (1) LD (RTH). Summer Tanager: 13 Apr. (1) RL (MCW), 16 Apr. (1) BS (KAG), 17 Apr. (1) LD (RTH).

Grosbeaks-Sparrows: Rose-breasted Grosbeak: 20 Apr. (3) NA (MCW), 22 Apr. (1) LD (RTH). Blue Grosbeak: 14 Apr. (1) H (DC), 8 days earliest ever NA; 19 Apr. (1) LD (RTH). Indigo Bunting: 19 Apr. (1) NA (KAG) then 26 Apr. with (88) NA (TOS). Evening Grosbeak: daily at H of (GM) NA with (2-48) during period; from (1-4) MC during period (GRM). Purple Finch: flocks (10-36) from all observers over period. Pine Siskin: numbers increased considerably in Feb. NA; daily at feeder (GM) NA 17 Feb. to 15 Apr. American Goldfinch: above normal NA. Savannah Sparrow: 30 Mar. (8) SHV (KAG). Vesper Sparrow: 29 Mar. (25), 30 Mar. (40-50), both SHV (KAG); 4 Apr. (7) BL (HEP). Slate-colored Junco: near normal NA; last (2) 26 Apr. NA. Chipping Sparrow: 18 Feb. (1) H (HCM), 21 Feb. (1). Harris' Sparrow: 18 Feb. (1) H (CO), 26, 27 Apr. (1) H (HH). White-crowned Sparrow: few, but normal NA. White-throated Sparrow: very scarce NA until migration, then 26 Apr. (206) (TOS). Fox Sparrow: last 7 Apr. (1) H (AT). Song Sparrow, last 4 Apr. (1) H (HCM).

Locations: AC-Ashland City area, ACM-Ashland City Marsh, BH-Bordeaux Heronry, BL—Bush Lake, BS—Basin Springs, farm of KAG, BV—Buena Vista Marsh, BY—Byrdstown, CL—Coleman's Lake, H—home of observer, LD—Lily Dale, MB—Murfreesboro, MC—Maury County, MBP—Montgomery Bell Park, NA—Nashville Area, OCR—Otter Creek Road, OHL—Old Hickory Lake, PPL—Percy Priest Lake, RH—Rabbit Hill, RL—Radnor Lake, RR—River Road, SHV—South Harpeth Valley, TJ—Two Jays Sanctuary, TR—Temple Road, WB—Woodbury, WC—Warren County, WR—Wood's Reservoir.

Observers: SB—Sue Bell, FB—Frances Bryson, DC—Mrs. David Cobb, AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, RH—Robbie Hassler, JSH—John S. Herbert, RTH—Roy T. Hinds, HH—Helen Hodgson, GRM—George R. Mayfield Jr., GM—Mrs. Geo. R. Miller, HCM—Harry C. Monk, FM—Fanny Murphy, CO—Mrs. Cliffton Ogden, HEP—Henry E.

Parmer, JP—Jimmy Parrish, AT—Ann Tarbell, TOS—Nash. Chapter Spring Count, LOT—Laurence O. Trabue, MW—Marvin Webb, MCW—Mary C. Wood.

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EASTERN RIDGE AND VALLEY REGION—*Loons-Geese:* Common Loon: present in small numbers through 31 Mar. (1) SHL (WC, TH, JW). Horned Grebe: 20 Feb. (3) BWP (KD), 27 Feb. (2) BL (GD, HD), 13 Mar. (1) BWP (KD), 31 Mar. (8) SHL (WC, TH, JW). Pied-billed Grebe: regular, max., 16 Feb. (16) NL (KD); last, 19 Apr. (1) SHL (DC, TH). Double-crested Cormorant: 18 April (2) WBL (KD), 18 Apr. through period (1) CL (KD). Great Blue Heron: regular through period; max., 14 Feb. (100) HRA (WiC *fide* KD). Green Heron: firsts, 6 Apr. (3) AM (KD), 8 April (1) JS (RH), 11 Apr. (1) K (BL). Cattle Egret: 15 Mar. (12) K (RS). Common Egret: 6 April (5) HRA (KD). Black-crowned Night Heron: 6 April through period (1 to 6) AM (KD, ML). Yellow-crowned Night Heron: 4 Apr., 12 Apr. (1) and (2) G (RN), 8 Apr. (1) JC (KJ). Least Bittern: 29 Apr. (1) AM (KD). American Bittern: 4, 8, 16 Apr. (1) K (BL); 4, 12 Apr. (1) G (RN); 6 Apr. through period MP (KD). Canada Goose: from start of period (200) in decreasing numbers until 5 Apr. Co L (FO); 2 Feb. (37) KSP (FA, JMC, RME, GW).

Ducks-Mergansers: Mallard: max., 2 Feb. (25) KSP (FA, JMC, RME, GW); last, 19 Apr. (5) OR (FA, GW). Black Duck: max., 14 Feb. (131) BWP and HRA (KD); last, 12 Apr. (2) JS (RH). Gadwall: max., 7 Feb. (18) NL (KD); last, 10 Apr. (6) SB (KD). Pintail: 13 Mar. (6) BWP (KD). Green-winged Teal: 31 Mar. (1) SHR (WC, TH, JW), 6 Apr. (2) SB (KD). Blue-winged Teal: first, 20 Mar. (3) BWP and SB (KD). American Widgeon: last, 10 Apr. (1) SB (KD). Shoveler: from 20 Mar. (8) BWP (KD) to 18 Apr. (2) HRA (KD); max., 6 Apr. (18) (KD). Redhead: 2 Mar. (2) BL (LRH), 26 Mar. (7) BL (GD, HD), 27 Mar. (13) BWP (KD). Ring-necked Duck: max., 6 Mar. (97) HRA (KD), last, 29 Mar. (2) PHL (WC, TH). Canvasback: 2 Feb. (4) KSP (FA, JMC, RME, GW), 27 Feb. (2) PHL (GD, HD), 20 Mar. (8) BWP (KD). Greater Scaup: max., 27 Feb. (122) BWP (KD); last, 27 Mar. (12) BWP (KD). Lesser Scaup: max. 29 Mar. (96) BL (WC, TH); last, 19 Apr. (22) SHL (WC, TH). Common Goldeneye: max., 1 Feb. (35) BWP (JD); last, 6 Apr. (2) BWP (KD). Bufflehead: max., 20 Mar. (37) HRA (KD); last, 18 Apr. (5) HRA (KD). Oldsquaw: 16 Mar. (1) F (FO, KOS). Hooded Merganser: max. 2 Feb. (9) KSP (FA, JMC, RME, GW); last, 27 Apr. (2) SHL (WC, TH). Red-breasted Merganser: 13 Mar. (1) CL (KD), 17 Apr. (1) NL (KD).

Vultures-Gulls: Turkey Vulture: roost, max., 14 Mar. (35) LHS (KD). Black Vulture: roost, max. 23 Feb. (97) LHS (KD); 19 Apr. (15) OR (FA, GW), 27 Apr. (7) SHL (WC, TH). Sharp-shinned Hawk: 20 Mar. (1) HRA (KD), 25 Apr. (1) Col (RS). Cooper's Hawk: 23 Mar. (1) S (FA, JA, JMC, JS, LS). Red-tailed Hawk: present in small numbers through period in most areas of region. Red-shouldered Hawk: 1 to 2 regular in CH area with two active nests (KD). Broad-winged Hawk: firsts, 11 Apr. (2) TRG (KD, RS), 17 Apr. (20) N (FO), 19 Apr. (41) SHL (WC, TH). Bald Eagle: 8 Apr. (1) BL (RT). Marsh Hawk: 10 Apr. (1) HRA (KD), 14 Apr. (1) NL (KD). Osprey: firsts, 26 Mar. (1) HRA (WiC *fide* KD); two active nest sites, CL, WBL (KD); 9 Apr. (1) OR (JMC), 9 Apr. (2) BL (WAB, CRS), 19 Apr. (1) SHL (WC, TH). Peregrine Falcon: 20 Apr. (1) SHL (WC). Ruffed Grouse: 9 Apr. (1) Col at about 1000 ft (ML), first report from this area (KD). Ring-necked Pheasant: 10 Apr. (1) HRA (KD). Sandhill Crane: 13 Mar. (100) SB (KD). King Rail: 6, 16 Apr. (1) AM (ML, KD). Sora: firsts, 6 Apr. (1) AM (ML), 20 Apr. (1) K (BL). American Coot: max., 7 Feb. (4000) NL (KD); last, 19 Apr. (15) OR (FA, GW). Common Snipe: last, 27 Apr. (2) K (JMC). Spotted Sandpiper: first, 12 Apr. (2) SHL (WC, TH). Solitary Sandpiper: first, 16 Apr. (2) AM (KD), 16 Apr. (1) G (RN). Greater Yellowlegs: firsts, 16 Mar. (2) F (FO), 23 Mar. (7) G (RN) K (OS), 10 Apr. (4) DL (BB). Lesser Yellowlegs: first, 16 Mar. (1) G (RN). Pectoral Sandpiper: 13 Mar. (3) SB (KD), 27 Mar. (44) SB and HRA (KD), 12 Apr. (1) G (RH). Dunlin: regular at SB until 10 Apr. (15) (KD); max., 20 Mar. (82). Dowitcher (species unknown): 10 Apr. (1) SB (KD). Herring Gull: max., 13 Feb. (30) BWP (KD); last, 27 Apr. (1) SHL (WC, TH). Ring-billed Gull: max. 27 Feb. (709) CL (KD); until end of period in Bristol area (WC). Bonaparte's Gull: 10 Apr. (7) DL (BB), 12 Apr. (2) G (RH).

Owl-Pipits: Barn Owl: 7 Feb. (1) G (RN), 24 Mar. (1) G (RN). Great-horned Owl: 4 Feb. (1) G (RN). Chuck-will's-widow: 27 Apr. (4) K (JMC). Whip-poor-will: 27 Apr. (2) K (JMC). Common Nighthawk: first, 17 Apr. (1) B (WC). Chimney Swift: firsts, 27 Mar. (1) CH (KD), 6 Apr. (1) G (RN), 10 Apr. (1) B (WC). Yellow-bellied Sapsucker: last, 23 Apr. (1) Col (ML). Eastern Kingbird: from start of period until 30 Mar. (1) N (FO); first, 13 Apr. (1) K (FA). Great Crested Flycatcher: first, 17 Apr. (1) Col (LL). Acadian Flycatcher: first, 24 Apr. (1) TRG (KD). Horned Lark: present through period; max., 17 Feb. (55) G (RN). Tree Swallow: firsts, 7, 13 Mar. (2) HRA (KD), 27 Mar. (10) BWP, SB (KD), 2 Apr. (5) N (FO). Rough-winged Swallow: firsts, 21 Mar. (1) Col (RS), 29 Mar. (1) BL (WC, TH), 30 Mar. (1) K (FA, JMC). Barn Swallow: firsts, 27 Mar. (1) BWP (KD), 29 Mar. (7) BL (WC, TH). Cliff Swallow: first, 31 Mar. CL (JD). Purple Martin: first, 8 Mar. (2) SB (KD). Red-breasted Nuthatch: last, 26 Apr. (1) K (MS). Brown-headed Nuthatch: (2) regular through period CoL (NH *fide* KD). Brown Creeper: last records, 4 Apr. (12) K (BL), 7 Apr. (1) JC (PR). House Wren: 12 Apr. (1) B (WC), 17 Apr. (1) JC (WAB, PR), 22 Apr. (1) G (HS). Winter Wren: 16 Apr. (1) Col (ML). Catbird: first, 16 Apr. (1) CoL (ML). Brown Thrasher: through period (1) G (ED). Wood Thrush: firsts, 4 Apr. (1) K (MS), 6 Apr. (1) MP (KD). Swainson's Thrush: firsts, 22 Apr. (2) JC (WAB), 28 Apr. (1) K (MS). Gray-cheeked Thrush: 28 Apr. (1) K (MS). Veery: 29 Apr. (1) K (FA). Blue-gray Gnatcatcher: first, 2 Apr. (1) Col (ML). Golden-crowned Kinglet: last, 6 Apr. (3) HRA (KD). Ruby-crowned Kinglet: regular through period; max., 19 Apr. (40) K (JMC, RME, ES). Water Pipit: last, 10 Apr. (65) HRA (KD).

Vireos-Warblers: White-eyed Vireo: firsts, 12 Apr. (2) CB (KD), 12 Apr. (1) G (RH). Yellow-throated Vireo: first, 8 Apr. (1) CL (MT). Solitary Vireo: first, 31 Mar. (1) K (MS). Red-eyed Vireo: first, 11 Apr. (1) PCR (KD). Warbling Vireo: first, 20 Apr. (1) Col (RS). Black-and-white Warbler: first, 1 Apr. (1) K (FA). Prothonotary Warbler: first, 11 Apr. (2) PCR (KD). Worm-eating Warbler: first, 8 Apr. (1) Col (ML). Golden-winged Warbler: first, 19 Apr. (1) K (JMC, RME, ES). Blue-winged Warbler: first, 18 Apr. (1) CB (KD). Tennessee Warbler: 29 Apr. (1) K (FA). Nashville Warbler: first, 26 Apr. (1) K (JMC). Orange-crowned Warbler: 13 Apr. (1) K (FA, JMC, JBO, KCOS). Parula Warbler: first, 6 Apr. (1) MP (KD). Yellow Warbler: first, 6 Apr. (1) DL (BB), 6 Apr. (1) G. (RN). Magnolia Warbler: first, 19 Apr. (1) DL (BB). Cape May Warbler: first, 23 Apr. (1) Col (ML). Black-throated Blue Warbler: 23 Apr. (1) K (MS). Myrtle Warbler: present through period. Black-throated Green Warbler: first, 4 Apr. (1) Col (ML). Cerulean Warbler: first, 11 Apr. (1) TRG (KD). Blackburnian Warbler: first, 12 Apr. (1) K (JMC, RME, ES). Yellow-throated Warbler: first, 4 Apr. (1) K (BL). Chestnut-sided Warbler: first, 26 Apr. (1) K (JMC). Blackpoll Warbler: first, 12 Apr. (1) Col (LL). Pine Warbler: 21 Feb. (1) BL (GD), 30 Mar. (1) SHL (WC, TH). Prairie Warbler: first, 11 Apr. (3) TRG (KD). Palm Warbler: first, 12 Apr. (1) Col (RS). Ovenbird: first, 12 Apr. (2) K (JMC, RME, ES). Northern Waterthrush: 24 Apr. (1) TRG (KD), 29, 30 Apr. (1) Col (ML). Louisiana Waterthrush: first, 30 Mar. (2) SHL (WC, TH). Kentucky Warbler: first, 16 Apr. (1) Col (ML). Yellowthroat: firsts, 12 Apr. (1) CB (KD), 12 Apr. (1) K (BL). Yellow-breasted Chat: first, 24 Apr. (3) TRG (KD). Hooded Warbler: first, 8 Apr. (1) Col (ML). Canada Warbler: firsts, 17 Apr. (1) TRG (KD), 19 Apr. (1) K (JMC, RME, ES). American Redstart: first, 11 Apr. (1) Col (RS), 11 Apr. (1) K (FA).

Orioles-Sparrows: Orchard Oriole: first, 18 Apr. (1) SB (KD). Baltimore Oriole: 19 Apr. (1) K (FA). Rusty Blackbird: 6 Apr. (30) MP (KD). Brewer's Blackbird: 2 Mar. (50) TCA (LRH). Scarlet Tanager: first, 1 Apr. (1) K (FA). Summer Tanager: first, 16 Apr. (1) Col (ML). Rose-breasted Grosbeak: firsts, 26 Apr. (1) Col (RS), 27 Apr. (1) B (WC). Black-headed Grosbeak: from start of period until 24 Apr. (1) S (FA, JMC, BR, KOS). Blue Grosbeak: first, 25 Apr. (1) OW. Indigo Bunting: first, 9 Apr. (1) Col (ML). Evening Grosbeak: present throughout period in larger than usual numbers. Purple Finch: present through late April. Pine Siskin: through period (1-7) Ch (KD), 7 Mar. (1) N (FO), 12 Apr. (1) K (JMC, MG, BW), 27 Mar. 4 Apr., 9 Apr., 21 Apr. (1 to 21) JC (HD). Savannah Sparrow: 8 Mar. (2) JC (GD, HD). Grasshopper Sparrow: 16 Apr. (1) G (RN), 17 Apr. (1) JC (HD). Vesper Sparrow: 21 Feb. (1) PCR (KD), 29 Mar. (6) BL (WC, TH), 6 Apr. (1) HRA (KD). Slate-colored Junco: last, 21 Apr. (2) PP (KD). Chipping Sparrow: firsts, 23 Mar. (1) JC (HD), 30 Mar. (1) K (FA). Harris' Sparrow: 1 Feb. through 28 Apr. (1) G (RN). White-crowned Sparrow: present in scattered locations throughout region and period. White-throated Sparrow: throughout region and period. Fox Sparrow: regular until 6 Apr. (1) MP (KD), 25 Feb.-14 Mar. (1-2) JC (HD). Swamp Sparrow: last records, 12 Apr. (4) G (RN), 27 Apr. (8) K (JMC, KOS).

Locations: AM—Amnicola Marsh, B—Bristol, BL—Boone Lake, BWP—Booker T. Washington State Park, CB—Chickamauga Battlefield, CH—Chattanooga, CL—Chickamauga Lake, CoL—Cove Lake State Park, Col—Collegedale, DL—Dunlap, F—Friendsville, G—Greeneville, JC—Johnson City, JS—John Sevier Steam Plant Area, K—Knoxville, KSP—Kingston Steam Plant, LHS—Long Hollow Swamp, Marion County, MP—Morse Pond, N—Norris, NL—Nickajack Lake, OR—Oak Ridge, OW—Old Washington, PCR—Powell Cross Road (Chat Area), PHL—Patrick Henry Lake, PP—Point Park, S—Sevierville, SB—Savannah Bay, SHL—South Holston Lake, SHR—South Holston River, TCA—near Tri-Cities Airport, TRG—Tenn· River Gorge near Chattanooga, WBL—Watts Bar Lake.

Observers: FA—Fred Alsop, JA—Jean Alsop, BB—Benton Basham, WAB—Bill Bridgforth, JMC—James M. Campbell, WiC—Wilford Caraway, WC—Wallace Coffey, ED—Elva Darnell, GD—Mrs. Geo. Dove, HD—Mrs. Harold Dillenbeck, KD—Ken Dubke, JD—Jon DeVore, RME—Ray M. (Danny) Ellis, MG—Maurice Grigsby, NH—Nat Halverson, TH—Tim Hawk, LRH—Lee R. Herndon, RH—Robert Holt, KJ—Katherine Jones, BL—Beth Lacy, L—Lindsey Lilly, M—Mike Lilly, RN—Richard and Ruth Nevius, FO—Frances Olson, JBO—J. B. Owen, PR—Pete Range, BR—Barbara Rankin, MS—Mable Sanders, CRS—Charles R. Smith, ES—Ed Smith, JS—Johneta Smith, KOS—Knoxville Chapter T.O.S·, LS—Louis Smith, HS—Helen Spees, RS—Roger Swanson, RT—Reid Tatum, MT—Mary Tunsberg, GW—Gary Wallace, JW—Johnny Wood, BW—Beth Wuest.

James M. Campbell, 15 Hedgewood Drive, Knoxville 37918.

EASTERN MOUNTAIN REGION: *Grebe-Snipe:* Pied-billed Grebe: last 6 April (1) WiL. Great Blue Heron: last 18 Mar. (1) MC (CRS). Mallard: last 6 April (2) WiL (CRS). Black Duck: last 18 Mar. (2) WiL. Gadwall: only on 2 Mar. (2) WiL (LRH). Pintail: 5 Mar. (3) WaL (FWB). Green-winged Teal: 31 Mar. (1) EFH (WAB, CRS). Blue-winged Teal: 29 Mar. (3) HCV (MS). American Widgeon: last 2 Apr. (1) WiL (LRH). Wood Duck: 31 Mar. (6) EFH (WAB, CRS). Ring-necked Duck: last 6 Apr. (18) WiL (CRS). Lesser Scaup: last 18 Mar. (1) WiL (CRS). Common Goldeneye: only on 9 Feb. (4) WaL (CRS)· Bufflehead: 6 Apr. (46) WiL (CRS). White-winged Scoter: 9 Feb. (1) WaL (LRH, CRS). Black Vulture: 3 Feb. (5) BM (CRS), 22 Mar. (2) BM (CRS). Cooper's Hawk: 23 Mar. (1) SV (CRS). Broad-winged Hawk: first 13 Apr. (1) SC (CRS); 12 Apr. (4) HCV (MS). Rough-legged hawk: 26 Apr. (1) HCV (MS). Golden Eagle: 2 Feb. (1) CC (SC). Marsh Hawk: 19 Apr. (1) HCV (MS). Pigeon Hawk: 26 Apr. (1) with small snake, HCV (MS). Ruffed Grouse: throughout Mar. and Apr. (1-2) near MC (CRS). American Coot: 30 Mar. (1) LPN (FWB). American Woodcock: 4 Mar. WaR (FWB). Common Snipe: 19 Mar.-9 Apr. (1-2) at MC (CRS).

Owls-Kinglets: Barred Owl: 17 Apr. (2) RM (FWB); 9 Feb. (1) CC (LN). Whip-poor-will: first 17 Apr. SC (FWB). Saw-whet Owl: 25 Apr. (1) (FA, JMC). Chuck-will's-widow: first 27 Apr. (1) MC (CRS). Chimney Swift: first 30 Mar. (1) MC (CRS). Ruby-throated Hummingbird: first 26 Apr. (1) HCV (MS). Red-bellied Woodpecker: throughout Mar. and Apr. (1-2) EGC (LRH). Eastern Kingbird: first 4 Apr. (2) HCV (MS). Great Crested Flycatcher: first 19 Apr. (3) HCV (MS). Acadian Flycatcher: first 27 Apr. (2) HCV (MS). Eastern Wood Pewee: first 19 Apr. Tree Swallow: first 4 Apr. (5) HCV (MS). Rough-winged Swallow: first 30 Mar. (2) MC (CRS). Barn Swallow: first 31 Mar. (6) EFH (WAB, CRS). Purple Martin: first 4 Apr. (11) HCV (MS). Common Raven: 23 Mar. (2) RM (FWB), 20 Apr. (2) UM (CRS). Brown Creeper: last 2 Apr. (1) MC (CRS), 19 Apr. (1) HCV (MS). Catbird: first 19 Apr. (1) HCV (MS). Hermit Thrush: only on 9 Feb. (1) WaL (LRH, CRS). Wood Thrush: first 17 Apr. (3) MC (CRS). Blue-gray Gnatatcher: first 4 Apr. (2) MC (CRS). Ruby-crowned Kinglet: last 31 Mar. (1) EFH (WAB, CRS).

Vireos-Sparrows: White-eyed Vireo: first 16 Apr. (1) MC (CRS). Solitary Vireo: first 4 Apr. (2) RM (CRS). Black-and-white Warbler: 13 Apr. (1) LA (CRS). Prothonotary Warbler: first 12 Apr. (1) HCV (MS). Worm-eating Warbler: first 13 Apr. (1) LA (CRS). Golden-winged Warbler: first 26 Apr. (2) HCV (MS). Parula Warbler: first 17 Apr. (1) U (CRS). Yellow Warbler: first 20 Apr. (5) HCV (MS). Black-throated Green Warbler: first 4 Apr. (1) HCV (MS). Yellow-throated Warbler: first 11 Apr. (1) BM (HD, LH). Chestnut-sided Warbler: first 17 Apr. (1) U (CRS). Ovenbird: first 17 Apr. (1) U (CRS). Pine Warbler: 13 Apr. (3) (GOS). Louisiana Waterthrush: first 30 Mar. (1) LA (CRS). Yellowthroat: first 20 Apr. (1) U (CRS). Yellow-breasted Chat: 26 Apr. (2) HCV (MS). Hooded Warbler: first 13 Apr. (2) (GOS). Rusty Blackbird: 23 Mar. (8) SV (WAB, DF, CRS). Scarlet Tanager: first 17 Apr. (1) U (CRS). Rose-breasted Grosbeak: 19 Apr. (1) HCV (MS). Evening Grosbeak: throughout period E; max. 22 Feb. (100) (RDM). Pine Siskin: 20 Apr. (10) UM (CRS). Savannah Sparrow: 23 Mar. (2) SV (CRS), 25 Mar. (2) EGC (LRH). Vesper Sparrow: first 23 Mar. (5) SV (CRS). White-crowned Sparrow; last 21 Apr. (1) E (FWB). Fox Sparrow: 16 Feb. (1) EGC (LRH). Swamp Sparrow: 30 Mar. (1) MC (CRS).

Locations: BM—Buffalo Mountain, CC—Cades Cove, Great Smoky Mountain National Park; GOS—Greeneville Chapter, T.O.S.; HCV—Heaton Creek Valley, Roan Mountain; LA—The Laurels Picnic Area, E—Elizabethton, EFH—Erwin Fish Hatchery, EGC—Elizabethton Golf Course, LPN—Lake Phillip Nelson, MC—Milligan College, RM—Roan Mountain, SC—Stoney Creek, SV—Shady Valley, U—Unicoi, UM—Unaka Mountain, WaL—Watauga Lake, WaR—Watauga River, WiL—Wilbur Lake.

Observers: FWB—Fred W. Behrend, WAB—Bill Bridgforth, SC—Scott Christy, DF—David Fenner, LH—Mrs. Lee R. Herndon, LRH—Lee R. Herndon, RDM—Roby D. May, LN—Miss Louise Nunnally, CRS—Charles R. Smith, MS—Mrs. Maxie Swindell.

Danny Ellis, 1 Hedgewood Drive, Knoxville 37918.

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IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

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Birds

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FALL MIGRANTS ASSOCIATED WITH FISH PONDS MUD FLATS

By Earl L. Hanebrink

It is the purpose of this paper to record some unusual observations of water and shore birds observed at fish ponds and mud flats during the 1967 fall migration through northeastern Arkansas. Several large ponds (10-20 acres) are located on the Larry Burns' farms on Highway 18 approximately 10 miles from the city limits of Jonesboro in Craighead County, Arkansas. These ponds were constructed in the flat farming area, for commercial fish farming which is becoming popular in this area. At this location there are four large ponds and several smaller ones surrounded by cotton, soybean, and rice fields. These ponds function in raising Blue Catfish, (*Ictalurus furcatus*) for commercial selling and sport fishing. During the fall of the year, Mr. Burns often drains some of the large ponds. This creates an unusual habitat type for this area. Large mud flats occur as a result of the drainage operations with some shallow pools remaining in the low places. These mud flats are an attraction for many shore and water birds which migrate through this area and are seldom seen otherwise.

Through this limited fall study one new species has been added to the state bird list and a second record was added for another species. Observations were made at these ponds and mud flats beginning on 24 October and terminating 18 November 1967. Seven visits were made to these ponds and mudflats and all birds were counted. Results are summarized in Table 1 which shows only those species actually using the mud flats or open water for feeding and including those species associated with the grassy edges along the levee.

Few American Golden Plover (*Pluvialis dominica*) have previously been observed during the fall migration through northeastern Arkansas. On 15 October, the Glossy Ibis (*Plegadis falcinellus*) was observed feeding in the mud flats by several members of the Arkansas Audubon Society. This species was first reported from northeastern Arkansas in the spring of 1965 at a heronry in Mississippi County (Hanebrink and Cochran, *Auk* 83:474, 1966). The Glossy Ibis has been observed nesting in this heronry but not during the 1967 breeding season. On several occasions a straggling Glossy Ibis was observed during the summer flying in the Mississippi County heronry. Possibly this bird

TABLE I

Species of birds found using the mud flats and open water in fish pond of Craighead County, Arkansas during the fall migration in 1967

SPECIES	10/24	10/27	10/28	10/31	11/2	11/8	11/18
Pied-billed Grebe		6					1
Western Grebe							1
Great Blue Heron					1		
Canada Goose							2
Snow Goose						4	1
Blue Goose				1		48	2
Mallard						6	8
Gadwall						25	150
Pintail						150	8
American Widgeon		50					200
Shoveler	75	105	40	25	25	15	10
Ring-necked Duck							3
Bufflehead						35	
Ruddy Duck					1		14
Hooded Merganser							13
Killdeer	100	125	125	95	100	100	50
American Golden Plover	3						
Common Snipe		8	30	8	8	20	
American Coot		707	3	3	13	21	1000
Greater Yellowlegs					2	55	
Lesser Yellowlegs	1	1	2	8		4	2
Pectoral Sandpiper	6	50	15	25	4	15	
Least Sandpiper	15	25	8	12		15	50
Dunlin					12	15	
Long-billed Dowitcher	5						
White-rumped Sandpiper				3			
Water Pipit		50	20				6
Eastern Meadowlark							5
Western Meadowlark	2	2	3	8			5
Red-winged Blackbird				2	2		10
Brewer's Blackbird		18	50				25
Common Grackle							40
Rusty Blackbird							80
Brown-headed Cowbird							50
Savannah Sparrow	20	2	12	15	6	2	8
Song Sparrow				12			5
Snow Bunting			1	1	1		

was one previously associated with the heronry. The first record of the state for a member of this genus was an immature bird taken at Lonoke on 16 September 1956. This ibis was collected and the skin placed in the University of Arkansas collection, UAZ 381 (D. James, *Proc. Ark. Acad. Sci.*, 14:8, 1960).

The observations of the Western Grebe (*Aechmophorus occidentalis*) on 18 November 1967, is the first record for the state of Arkansas. This bird was observed swimming among a large group of ducks of mixed species which included Gadwalls, American Widgeons, Mallard, and Pintails. The Western Grebe associated with these ducks but would depart for a short distance from them at times. Bird verifying documentation of extraordinary sight records was completed by the writer and sent to Dr. Douglas James at the University of Arkansas where a permanent file is kept.

A second record for the state of Arkansas was the observing of the Snow Bunting (*Plectrophenax nivalis*) at the edge of mud flats of one of the larger drained ponds. This species was first observed in Arkansas and collected by H. H. Shugart and A. P. Parker on 6 November 1959, at Calion, Arkansas. A skin was prepared and has been placed in the University of Arkansas collection, UAZ 372 (D. James, *Proc. Ark. Acad. Sci.*, 14:13, 1960). On 15 October

1967, a second state record of the Snow Bunting was made. Several members of the Northeast Arkansas Audubon Society observed this bird at very close range. This bird remained until 5 November, when it was last seen by Mrs. Larry Burns, President of the Northeast Arkansas Audubon Society. Bird verification and documentation of extraordinary sight records was completed by the writer and filed with Dr. Douglas James, Department of Zoology, University of Arkansas. A near report of this species, recorded from Tennessee, was one reported from Presidents Island in the Mississippi River at Memphis, Tennessee (*The Migrant,* 32:49).

The Snow Bunting observed at the mud flats on the Larry Burns' farm remained alone most of the time. A few times it was observed mingled with Savannah Sparrows (*Passerculus sandwichensis*) in the grass tufts at the edge of the mud flats. These ponds are bordered by dense grass where Savannah Sparrows could usually be observed. The Snow Bunting remained within a certain area and could always be flushed from the grassy borders. It would fly a short distance and light, usually on the mud flats, or on some limb or twig extending from the mud. The Snow Bunting is conspicuous for its whiteness—almost pure white below, with satin-like brownish on top of the head and back, black on the upper wing and wing tips and the center tail feathers. In flight the wings show large white areas.

During most of the fall migration, large numbers of sandpipers, snipes, and plovers were present, feeding. These could be found probing in the mud for food (Table 1).

Several species of ducks and geese used these ponds for resting and feeding. Shovelers were usually found probing in the shallow pools of the mud flats. Other species were usually found swimming in the water of the ponds which were not drained.

Brewer's Blackbirds (*Euphagus cyanocephalus*), rare in northeastern Arkansas, were observed on three occasions in flocks up to 50 birds feeding on the mud flats. Also feeding near the borders of the mud flats was the Water Pipit (*Anthus spinoletta*). These could be found in varying numbers during most of the fall migration.

Western Meadowlarks (*Sturnella neglecta*) were found to be more numerous at this location than in any other area in northeastern Arkansas. Most previous recordings of this species were from Crowley's Ridge associated with pastures and feed lots (Robert Lowery and Earl L. Hanebrink, *Proc. Ark. Acad. Sci.,* 21:26-32, 1967).

An unusual sighting of the Lapland Longspur (*Calcarius lapponicus*) occurred on 30 December on the 1967 Christmas Bird Census at the same location (*Audubon Field Notes,* 22:299, 1968). Near the edge of one of the larger mud flats which was bordered by a soybean field over 600 Lapland Longspurs were observed. These birds flew in large flocks and began feeding in the cut-over area of the soybean field as the ground was being covered with snow.

Another unusual sighting from this area was the recording of the Pigeon Hawk (*Falco columbarius*). This single bird remained in the area for approximately two weeks before the Christmas Bird Census and was recorded on 30 December 1967, on the Christmas Bird Count (*Audubon Field Notes* 22:299, 1967). Documentary forms were completed and sent to Dr. Douglas James at the University of Arkansas. One previous sight record of this species occurred on Crowley's Ridge in northeastern Arkansas on 7 March 1965 (Hanebrink, Doctoral Dissertation, Oklahoma State University, 1965, p. 21).

The flat homogeneous farm lands as typically found in northeastern Arkansas is normally thought to be barren or nearly so for bird watching. With the creation of a new habitat type several interesting species have been recorded. Many of the shorebirds fly through here but seldom stop unless suitable feeding areas occur. These shallow pools and mud flats have provided adequate feeding grounds for these birds.

Department of Biology, Arkansas State University, State College, Arkansas 72467.

SPRING TOWER-KILL IN KNOX COUNTY

By Fred J. Alsop, III and Gary O. Wallace

During the night of 7 May and the early morning hours of 8 May 1969, several species of passerine birds were killed when they flew into a television tower in Knox County, Tennessee. The broadcasting tower of WTKV (Channel 26) is located atop Sharp's Ridge, elevation 1,285 feet above sea level, within the city of Knoxville. The tower rises 1,073 feet above the crest of the ridge and is supported by a tripod of cables.

The kill was discovered during the daylight hours of 8 May 1969, by the station technicians who, in turn, reported it to the Zoology Department of the University of Tennessee.

TABLE 1

Measurements of Birds Killed At A

Television Tower in Knox County

(All measurements in millimeters,
weights in grams)

Species	Wt.	Length	Extent	Wing	Tail	Bill	Tarsus	Testis	Ovary
1. E. Wood Pewee	15.1	160	264	89	76	14	17	R.5X3 L.6X3	
2. Wood Thrush		Mashed in parking lot							
3. Catbird	37.0	199	257	86	93	18	31		11X3
4. Red-eyed Vireo	17.1	147	244	82	56	12	21		5X3
5. Red-eyed Vireo	17.0	138	241	78	53	12	23		7X5
6. Red-eyed Vireo	15.6	142	233	80	51	12	20		8X3
7. Red-eyed Vireo	17.1	144	252	82	55	12	21	R.6X4 L.6X4	
8. Red-eyed Vireo	16.5	145	243	82	55	12	21	R.6X4 L.7X5	
9. Red-eyed Vireo	17.6	133	237	79	52	13	20		5X2.5
10. Red-eyed Vireo	17.1	147	246	83	57	12	20	R.6X4 L.7X4.5	
11. Red-eyed Vireo		Mashed in parking lot							
12. Red-eyed Vireo		Mashed in parking lot							
13. Black-and-White Warbler	9.3	117	203	67	49	10	17		7X4
14. Black-and-White Warbler	11.4	121	210	72	49	11	19		8X4
15. Tennessee Warbler	9.7	105	186	63	41	11	17		4.5X3
16. Magnolia Warbler	8.4	116	176	60	48	9	19		6X4
17. Bay-breasted Warbler	10.2	127	214	72	51	13	20		5X3
18. Bay-breasted Warbler	Male,	Mashed in parking lot							
19. Kentucky Warbler	13.0	114	200	66	48	11	26		6X4
20. Canada Warbler	10.5	137	195	65	56	10	19		6X3

We arrived at the tower at 5:30 p.m. (EDT) and after a search of the grounds around the tower we found a total of twenty individuals representing ten species (see Table 1). It is possible that many other birds could have been

TABLE 2

Weather Conditions for Knoxville, Tennessee

6:00 P.M. May 7, Through 6:00 A.M. May 8, 1969

Time (EDT)	% Cloud Cover	Ceiling (Hnds. of ft.)	Visibility	Temperature	Wind Direction	Wind Speed	Precipitation
6:00- 9:00 P.M.	80	UNL*	20	80°	West	8	0
9:00-12:00 P.M.	90	CIR**	15	71°	South	7	0
12:00- 3:00 A.M.	100	CIR	15	69°	Southwest	5	0
3:00- 6:00 A.M.	100	6000	15	70°	Southwest	9	.02

* UNL: unlimited ceiling
** CIR: cirriform clouds of unknown ceiling

overlooked in the rugged terrain surrounding the tower. Almost all of the dead birds were found in the parking area or lawn adjacent to the tower or on the wooded down-hill slope just north of the tower. By noting the locations of the birds in relation to the tower we are given some information as to the direction of flight (Stoddard and Norris, 1967). In Tennessee, casualties during spring migration are less common than in fall migration (Ganier, 1966; Laskey, 1966). This is the second known kill in the spring at channel 26 tower (Campbell, 1967, personal contact).

Since weather patterns play a significant role in casualties to migrants, local weather conditions for the night of 7 May and early morning hours of 8 May are given in Table 2.

Birds identification confirmed using Chapman, 1939.

LITERATURE CITED

Chapman, F. M. 1939. Handbook of Birds of Eastern North America. Dover Publications, Inc. New York.

Ganier, A. F. 1966. Some facts learned from nocturnal migration. Migrant, 37: 27-34.

Laskey, Amelia R. 1966. T.V. tower casualties at Nashville: spring and fall, 1966. Migrant, 37: 61-62.

Stoddard, Sr., H. L. and R. A. Norris. 1967. Bird casualties at a Leon County, Florida TV tower: An eleven-year study. Bul. No. 8, Tall Timbers Station, Tallahassee.

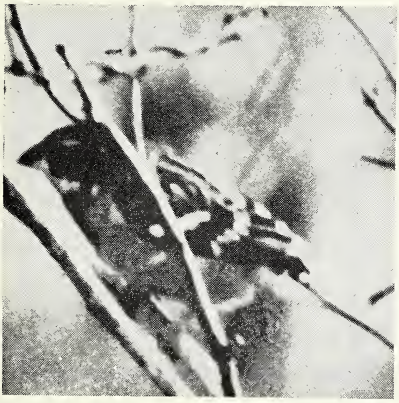
Department of Zoology, The University of Tennessee, Knoxville, Tennessee 37916.

BLACK-HEADED GROSBEAK IN TENNESSEE

By Fred J. Alsop, III

On 23 March 1969, a Black-headed Grosbeak (*Pheucticus melanocephalus*) was observed by Jim Campbell and me at the home of Mr. and Mrs. Orton L. Duggan, Sr. on Jones Cove Road approximately 9 miles east of Sevierville, Sevier County, Tennessee. This constitutes the first record of this western species for the state.

The Duggans first noticed this visitor at their feeders in December, 1968, or early January, 1969 (an exact date could not be determined). Unable to identify their "Loner", as they called it, the Duggans contacted a friend, Mrs. F. Earle Rankin, Pigeon Forge. With a number of bird books the Duggans and the Rankins were still unable to find any picture that exactly fitted the bird and wondered if it could be a hybrid between the Rose-breasted Grosbeak (*Pheucticus ludovicianus*) of the East and the Black-headed Grosbeak of the West. Mrs. Rankin called her cousin Jim Campbell.



We observed the bird at 8:20 a.m. (EST) as it approached the Duggans' active bird-feeders. The sky was sunny and the temperature was approximately 45°F.

We studied the field marks at a distance varying from 25 feet to 60 feet for 20 minutes. Campbell used 7 to 12 x 35 zoom binocs, I used 7 x 35 binocs. Identification was not difficult as I was familiar with this species from several western states. The plumage, however, was that of a male in the first nuptial plumage. No popular field guide shows this plumage and this had caused the previous problems of the other observers.

The following characteristics were recorded: upper mandible ashy-gray, lower mandible pale gray to pinkish; broad median coronal stripe buffy cinnamon bordered laterally with black; a white supraorbital stripe; lores and auriculars black, auriculars margined with white on ventral side; chin, throat, nape, breast, sides, flanks, and rump buffy cinnamon; belly lemon-yellow bordered with buff; back and scapulars buffy with many black streaks; upper tail-coverts dark brown with large white spots; tail feathers dark brownish dorsally with central feathers almost black, dark brownish-gray below; outside vanes of two outer tail feathers tipped with white; under tail-coverts white; primaries dark brown, secondaries and upper coverts black boldly tipped with white producing two white wing-bars when wings are folded at rest; under wing-lining lemon-yellow; legs and feet pinkish-gray.

Because many color photographs were taken to confirm this record, the grosbeak was not collected. Though the bird came to the Duggans and fed several times daily I was never able to observe it feeding in spite of several trips and many hours of watching and photographing it. It was at these times most wary, approaching the feeders through the trees or low in the underbrush, but never joining the other birds that were busily feeding.

On several occasions I heard it give a loud sharp note indistinguishable from that of the Rose-breasted Grosbeak, but never any other sounds.

During the weeks that followed other members of the Knoxville Chapter T.O.S. also observed this bird. It was last seen by Mrs. Duggan at her home on 24 April 1969.

It is of great interest to note that Ohio recorded its first Black-headed Grosbeak during this period. On 10 April 1969, an individual in the young male plumage of the East Tennessee bird appeared at a feeder in Milford, Ohio and was also photographed.

REFERENCES

Bent, A. C. and collaborators. 1968. Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows, and Allies. Dover Publications, Inc. N. Y.

Maslowski, K. H. 1969. "Black-headed Grosbeak: Milford Man Records Ohio's First Sighting." Cincinnati Enquirer (Sunday, 20 April 1969).

Peterson, R. T. 1941. A Field Guide to Western Birds. Houghton Mifflin Co. Boston.

Pough, R. H. 1957. Audubon Western Bird Guide. Doubleday & Company, Inc. Garden City, N. Y.

Robbins, C. S., B. Bruun, & H. S. Zim. 1966. A Guide to Field Identification Birds of North America. Golden Press, N. Y.

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ROUND TABLE NOTES

AN ALBINO LOGGERHEAD SHRIKE COLLECTED FROM DREW COUNTY, ARKANSAS—An immature complete albino Loggerhead Shrike (*Lanius ludovicianus*) was collected on 1 July 1967, by Mr. O. J. Tooley at Wilmar in Drew County, Arkansas. This specimen has been mounted and is displayed in the albino case of the Arkansas State University Museum.

The measurements of this immature bird are as follows: total length, 13.5 cm; bill (cord of culmen from base), 1.2 cm; tarsus length, 2.5 cm; length from the bend of the wing to the tip of wing, 7.5 centimeters. This specimen was not sexed when the skin was prepared.

A review of the literature shows plumage aberrations to be more common among waterfowl, game birds, finches, icterids, and members of the family Corvidae (Ross, *Cassinia* 50:2-21, 1963). In this paper Ross refers to only one pure white specimen of the Loggerhead Shrike from his study of skins made at the various museums. This specimen is housed in the collection at the National Museum.

Albinism of North American birds has previously been studied by several workers (Deane, *Bull. Nutt. Orn. Club,* 1876, 1879, and 1880; McGregor, *Conder* 2:86, 1900; Nero, *Auk* 71:137-155, 1954; and Ross, *Cassinia* 50:2-21, 1963). There are many published reports of albino birds of a particular species in books and periodicals. From a review of literature and a check with various museums this specimen is the second record of albinism for this species.

EARL L. HANEBRINK, Arkansas State University.

BRANT AND WHITE-FRONTED GEESE IN EAST TENNESSEE.—In November 1965, hunters at the Blythe Ferry Goose Management Area killed single specimens of the Brant (*Branta bernicla*) and the White-fronted Goose (*Anser albifrons*). The writer was informed of the kills by Mr. Bill Allen, Waterfowl Biologist for the Tennessee Game and Fish Commission. These specimens could not be obtained for preservation in the form of study skins but Mr. Allen took color pictures of them and furnished me with prints. These prints were examined by me and seemed conclusive. I forwarded them to Mr. Albert F. Ganier, T.O.S. Curator, who states that he is in agreement and has filed them in the T.O.S. records. The location where these two birds were taken is in a managed goose shooting area across the Tennessee river to the southeast of Hiwassee Island Waterfowl Refuge. The area borders the river for approximately one mile and has a large slough running into it which divides the area into two approximately equal segments. The area is covered almost exclusively by grain fields, with small stands of timber dividing the fields.

With the taking of these new species within the area, it brings to five the number of species of geese that have been taken there. Canada Geese are taken regularly and Blue Geese and Snow Geese are encountered by hunters less frequently. Previously sight records of the Brant are recorded in *The Migrant,* 26:9, 30:54 and 37:12; of the White-fronted Goose, 16:10, 32:35, and 33:20.

JON E. DEVORE, 4922 Sarasota Drive, Hixson 37343.

BARNACLE GEESE AT COVE LAKE STATE PARK—On a Knoxville Chapter T.O.S. field trip, 10 February 1968, two extremely rare geese were found at Cove Lake State Park (north of Lake City, Tennessee.) The two Barnacle Geese (*Branta leucopsis*) are said to be "very likely the rarest North American birds ever to have been identified in Tennessee". They nest in Northeastern Greenland and winter in Europe.

Most of the Knoxville Chapter, including Dr. James T. Tanner, viewed the two Barnacle Geese. The last date that they were seen was 17 March 1968. The Park Ranger stated that the Barnacle Geese had been there for several weeks but he had not been able to identify them. He was able to observe them since the geese would travel about 500 yards over land to the front of the park restaurant to feed on corn scattered for them.

On the morning of the T.O.S. field trip, I got a late start and went directly to the lake thereby missing the excellent view and display by an adult Bald Eagle at Norris Dam where the more alert club members stopped first. I was scanning the flock of Canada Geese for the possibility of Brant when two white faces came into my field of vision. I was using 8 x 40 binoculars. I saw them as they were just entering the water. I temporarily lost them as they swam out to mingle with the 200 Canada Geese while I hastened to get my 30x telescope. However, after a little effort, I was soon able to distinguish the two smaller Barnacle Geese from the Canadas by their lighter gray appearance, the more pronounced wavy effect on their backs, black breast (like the Brant), and the white faces. By the end of day and on later visits, one could very easily pick out the Barnacle Geese with the naked eye once one knew for what he was searching.

The honor of first identification belongs to an Oak Ridge school teacher and artist, George Wilson. He had read J. B. Owen's column, "For the Birds," in the *Knoxville Journal* which told of the possibility of two Brant being at the lake (with the heads under wings and far out in the lake, a person seeing black-breasted geese would think of Brant, which are rare enough). He went to the lake the same day, found the geese, and sketched them. Upon returning home, he discovered he had sketched Barnacle Geese. He telephoned Mrs. Paul Olson, a T.O.S. member from Norris, about his discovery.

Several T.O.S. members considered the possibility that the two Barnacle Geese escaped from a zoo or a farm. However, according to J. B. Owen's column the next week, a tame goose would not be likely to mix so naturally with the wild geese nor to show the same amount of caution when a person approaches. I concur in that observation. Also, I would add that the Knoxville area had several Oldsquaws, White-winged Scoters, and some Greater Scaups visiting this last winter. These are also coastal waterfowl which seldom come this far inland. Perhaps the same or some of the conditions which would explain the presence of these sea ducks could also explain the appearance of the two Barnacle Geese.

Roger Tory Peterson writes in his *A Field Guide to the Birds* (not revised in 20 years) that the Barnacle Goose is "a salt water species that has occurred almost a score of times on this side of the Atlantic." There have been five records in North Carolina, the latest two being in November, 1949 and December, 1950. According to *Birds of North Carolina* by T. Gilbert Pearson, *et.al.*, the Barnacle Goose prefers to feed on the short grass of coastal meadows. It received its name because of the old Norse tradition that it was produced from a barnacle.

Tony Koella, 522 Sycamore Street, Morristown.

BANDED OSPREY IN FRANKLIN COUNTY—On 11 April 1968, Game and Fish Officer L. H. Sprague brought me a dying Osprey (*Pandion haliaetus*) which had been found by Mr. Elijah Bailey on his farm in Hawkins Cove near Sewanee. This bird bore band no. 558-86137, which was promptly reported to the Fish and Wildlife Service, Migratory Bird Population Station, Laurel, Maryland.

The Osprey succumbed in about 4 hours, during which time it exhibited several violent shaking chills. Its body was frozen and an effort will be made to determine the cause of death.

Later that morning, my wife, Jean, watched another Osprey catch a sucker from a small creek in Hawkins Cove. Eight other hawks, including red-tails, were seen the previous day in the Sewanee area, apparently utilizing the upwelling air currents along the high cliffs in their northward migration.

On 23 July 1968, the Fish and Wildlife Service reported that this Osprey had been banded 11 miles south of Hillman, Michigan (northern Michigan between Lake Michigan and Lake Huron) as a nestling on 21 July 1963, by Mr. Sergej Postupalsky. Mr. Postupalsky has written me that it was one of two young in a nest on a dead snag about 7 feet above the water of Fletcher Pond. Fletcher Pond is a storage reservoir of about 6,500 acres, with 10 to 15 pairs of Osprey nesting there each year, and 5 to 12 young being raised each summer since 1962.

It is hoped that this recovery plus other banded bird recoveries will help establish exact migratory routes for transients nesting in particular areas of our continent.

The Osprey has been recorded as a fairly regular spring transient in the Sewanee area from 11 to 21 of April and less regularly in the fall during October.

Dr. Harry C. Yeatman, University of the South, Sewanee 37375.

SANDHILL CRANES IN PICKETT COUNTY—In the late afternoon of 15 November 1966, my husband saw 66 Sandhill Cranes (*Grus canadensis*) flying southward over our home located on the Wolf River Fork of the Dale Hollow Reservoir. They were flying in a long broken "V". The sun was low in the west, partly cloudy with gusts of wind from the south. As they approached what must have been a strong air current, they started circling in confusion and gaining altitude. We have noticed other migrating fowl doing this at this same location. During the confusion nineteen of them left the flock, circled back over our house and disappeared behind the bluff. We were unable to observe these because of approaching darkness.

The following morning at 0915, my husband called me at work to say that the cranes were leaving and heading in my direction. There were nineteen in this group, low enough to see, without binoculars, the long outstretched necks and the legs out behind. They were again in "V" formation, calling excitedly and fighting a gusty wind to gain altitude.

For approximately ten years we have been making casual observations, using 7 x 35 binoculars, of migrating Sandhill Cranes using this route. In the fall of 1966, I started keeping records of dates, weather conditions, and direction of flights.

From the notes I have kept I have drawn the following conclusions: migration starts early in the spring (my earliest observation being 5 March 1969); they call frequently while in flight, at night as well as day, and I have verified calls at night by immediately listening to sound recordings on the National Geographic Society's, "Water Prey and Game Birds"; they fly on cloudy, windy days as well as clear and calm days, taking advantage of thermals for soaring; they fly in flocks of from 30 to 100, almost always using a "V" formation (Walkinshaw's *The Sandhill Cranes,* p. 30, also gives the flight formation as usually a "V"; sometimes in lines, wavy and irregular, or diagonal; sometimes in haphazard formation). Overnight roosting, feeding or resting in this vicinity has not been reported, except in the aforementioned incident, although I have heard local residents mention having seen "brown cranes" in the river bottom fields.

In Ocala National Forest, Fla., my husband and I observed at least 33 in flight on 12 March 1965. On 13 October 1965, we saw two feeding in a marshy pond; two days later we found ten at this same pond and were able to watch them at close range, using 7 x 35 binoculars. Most of these were adults, showing the red patch in the forehead.

The following is a list of dates and numbers of cranes I have observed in Pickett County: 15 November 1966 (66); 10 March 1968 (31); 21 October 1968, unknown number heard before daybreak; 5 March 1969 (56), in two loose V's, shifting to form one long irregular "V"; 14 March 1969 (51) in two V's, eventually forming one long loose "V".

Robbie Hassler, Box 1, Byrdstown 38549.

LARGE FLIGHT OF SANDHILL CRANES AT CHATTANOOGA— On the evening of 9 November 1968, the writer, along with Mrs. Mark E. DeVore, Mrs. Donna Turner, and Mr. James A. Garrett observed a flight of 276 Sandhill Cranes (*Grus canadensis*). The location of the sighting was the writer's home, which is located approximately one mile due north of Chickamauga Dam. When first seen at 6:49 p.m., the birds were flying in a long line, wing tip to wing tip, in a southwesterly direction, parallel to the Tennessee River. The altitude at which the birds were flying was estimated to be between 400 and 450 feet. After having flown approximately one-half mile down the river course (SW), the birds began a turn back up-river to a northeasterly direction and changed their flight pattern from a straight line to a distinct V-shape. The line of flight of the birds then brought them directly over the observers and an accurate count was made of their number. Once beyond the observers' location, the birds began to alternately flap their wings and then glide, all the while maintaining the V-formation and the northeasterly direction of flight back toward the lake. Due to the fast declining light conditions, the birds passed from sight about one mile from the observers at 6:55 p.m. It should be noted that all four observers heard the birds well before and after they were visible with the binoculars. To this writer it seemed as if most of the birds were calling almost continuously, with their clamor when directly overhead being almost deafening. It could be speculated that in the poor light, especially with the absence of star or moon light due to a cloud cover and the fact there are a great number of lights around Chickamauga Dam and adjacent areas, the birds' actions represented the fact that they were confused and for the moment lost.

A check of Walkinshaw's article on the migration of the Sandhill Crane (*The Wilson Bulletin,* 72:358-384) and all issues of *The Migrant* since that date reveals this flight of Sandhill Cranes to be the largest single group of this species recorded at one time within the state of Tennessee.

All observations were made with 7 x 50 Bausch & Lomb and 7 x 35 Mirakel binoculars.

Jon E. DeVore, 4922 Sarasota Drive, Hixson 37343.

WILLETS AND WILSON'S PHALAROPE NEAR NASHVILLE—During the course of making the annual spring census about Nashville, on 26 April 1969, a flock of 33 Willets were observed in the Cumberland River Bottoms about 22 miles northwest of Nashville. From their light color and assigned range, I assume these to have been the Western Willet (*Catoptrophorus semipalmatus inornatus*), rather than the Atlantic coast race. Our party was closing out the day in late p.m. and other cars had gone ahead when Ben Groce and I, in the last car, caught sight of the flock alighting in the grass at the far side of a backwater slough in a pasture. We were able to approach them to within 200 feet and observe them at leisure. They were not feeding but stood quietly as though resting from a long flight. Occasionally, one would extend its wings upward as though to show the black and white wing pattern beneath. There are 4 former local records for the Willet: 22 April (1), 25 April (1), 27 April (7), and 28 April (1).

On 1 May, five days later, I revisited the same place accompanied by Dr. Charles Farrell and David Lee, one of his biology students. We found a single Willet standing quietly on a mud flat and about 150 yards away, on the same mud flat, a Lesser Yellowlegs and a small and very active shorebird. The two were quite congenial and fed close together, there being no other shorebirds except the Willet in the vicinity. The small bird did not conform to any of our usual visitants and at the distance we had some trouble being certain of its markings although we were finally able to identify it with the aid of our bird guide. We could not approach closer because of the stretch of intervening water but fortunately both birds arose and, flying about together, circled and alit about 100 feet away, where the Willet had been. The smaller one was then easily verified as a Wilson's Phalarope (*Stegnanopus tricolor*). Birds of this species which I had observed feeding during the breeding season in the Northwest, were either swimming or wading in water rather than on mud flats. There are two former records for this species in the area: 1 on 3 May 1954, by C. M. Weise and the other on 12 August1966, by H. E. Parmer who describes its actions in *The Migrant,* 37:58.

Albert F. Ganier, 2112 Woodlawn Dr., Nashville 37212.

WESTERN TANAGER IN DYER COUNTY—On the clear morning of 23 April 1969 at 7 a.m., I was bird watching from a west window with 6 x 30 binoculars, when I saw a flash of yellow in an elm tree about fifty feet away. Soon I could see an orangish red face emerging through the leaves and I expected to see a changing Scarlet Tanager emerge. Then the bird came into full view with his brilliant yellow body, red head, black tail and black wings with very definite wing-bars, and black across his back connecting the upper part of his wings. I was able to watch him for about three minutes, before he flew away. The next morning at 6 a.m. I was at the same window and saw the bird in the same elm tree. I called my son, Russell, to come and look. He also had a very satisfactory look at the bird, which he and I identified as a Western Tanager (*Piranga ludoviciana*), using Peterson's *Field Guide to the Birds* and *Birds of North America* by Robbins, Bruun and Zim as our references. Mrs. C. K. G. Sumara of Tiptonville said that a pair of Western Tanagers were seen in Reelfoot State Park in 1963.

Celia Hudson, Lattawoods, Dyersburg 38024.

WHIP-POOR-WILL FORAY—Six Elizabethton Chapter T.O.S. members conducted a Whip-poor-will (*Caprimulgus vociferus*) count on the evening of 30 May 1969. The route followed was graveled Forest Service Route 87, which lies in Carter and Sullivan Counties along the north slope of South Holston Mountain. The count began at the south shore of South Holston Lake at 8:15 p.m. EST and proceeded for 15.2 miles to a point about 0.5 miles north of Biltmore, Carter County, where the count ended at 10:07 p.m. EST. The area covered is primarily wooded mountain slope interspersed with recently cleared areas. The elevation of the area ranges from approximately 1700 to 2400 feet. Stops, as in previous counts, were made for about one minute at half-mile intervals. The weather was clear and warm with no wind. The moon was full. A new high of 112 Whip-poor-wills was recorded. Previous counts, with total birds noted on each count in parenthesis, are as follows: 24 April 1959 (56); 18 May 1962 (73); 13 May 1965 (69); 2 June 1966 (39); 21 June 1967 (45); (*The Migrant* 38:41) and 10 June 1968 (85). All of these counts followed the route and procedure described above. Two Barred Owls (*Strix varia*) were also heard on this year's count. The following observations have been made concerning the calling of Whip-poor-wills: (1) more birds are heard on moonlit nights than are heard on non-moonlit nights or when clouds cover the moon, (2) more birds are heard in open areas than in wooded areas, and (3) more birds are heard on the nights when the wind is not blowing. Observations (1) and (2) probably result from preference of the birds. It is hard to tell, however, whether observation (3) results from bird preference or from the inability of the listener to hear well under windy conditions.

William A. Bridgforth, Jr., 501 Laurel Avenue, Johnson City 37601.

BARN SWALLOWS NESTING IN THE GREAT SMOKY MOUNTAINS NATIONAL PARK.—Barn Swallows (*Hirundo rustica*) have been observed in the Great Smoky Mountains with some regularity since 1935. Arthur Stupka in his "Notes on the Birds of the Great Smoky Mountains National Park" (p. 98-99, Univ. of Tennessee Press, 1963) reports this swallow is an uncommon spring and fall migrant and may be a rare summer resident in the park. Stimson (Stupka, 1963) observed 2 Barn Swallows in Cades Cove on 7 June 1958, but reported no nest.

On 20 June 1969, at 5:20 p.m. (EDT), I watched two adult Barn Swallows hawking over the yard and fields adjacent to the Becky Cable house in

Cades Cove, Blount Co. Tenn. As these birds caught insects they flew to a nearby cantilever barn. There I observed them feeding four fully-feathered juveniles in a nest placed on a rafter 15 feet above the ground. This constitutes the first nesting record of this species for the park.

On 25 June 1969, the four youngsters had left the nest and were sitting about two feet from it on the rafter which supported it. From this date on I never saw them enter the nest again. The adults fed them where they found them on the rafter. In succeeding days the fledglings moved farther and farther from the nest and onto adjacent beams. They were present in the barn until 1 July 1969.

On 2 July 1969, the four young and the two adults were observed flying and feeding over the fields near the barn. They remained in the area until the first week of September.

Other nests were searched for after the first discovery. Though not all structures in the cove could be thoroughly searched, Barn Swallows, both adults and individuals in juvenile plumages, were observed near four other structures in the cove.

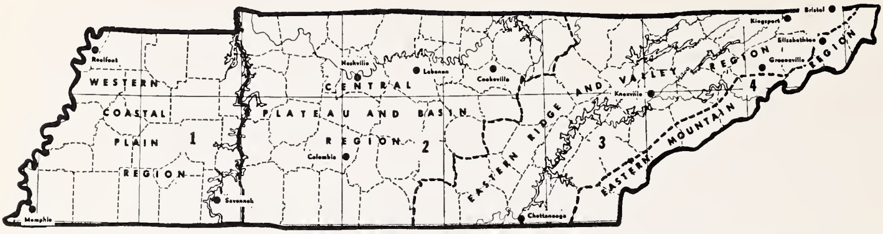
On 21 June 1969, an abandoned nest was found in a hay barn on the Shield's place in the cove. Six Barn Swallows, of which two were adults, were flying over nearby fields.

Doug Pratt, seasonal ranger-naturalist, (personal contact) reported Barn Swallows also nested near the Oconaluftee visitor center on the North Carolina side of the park this summer.

FRED J. ALSOP, III, Department of Zoology and Entomology, University of Tennessee, Knoxville 37916.

THE SEASON

Charles R. Smith, *Editor*


Reelfoot
WESTERN COASTAL PLAIN REGION
1
Memphis
Savannah
CENTRAL PLATEAU AND BASIN REGION
2
Nashville
Lebanon
Cookeville
Columbia
EASTERN RIDGE AND VALLEY REGION
3
Knoxville
Chattanooga
Kingsport
Bristol
Elizabethton
Greeneville
EASTERN MOUNTAIN REGION
4

The months of May, June, and July were all dry, with precipitation averaging as much as two inches below normal in some areas. Temperature readings were essentially average for the period, with May and June being somewhat cooler than normal, and July being a little warmer than usual. The higher temperatures and lower rainfall combined to make July a rather hot, dry month across the state.

The summer season was not especially outstanding with respect to observations of birds. The Osprey and Tree Swallow from the Ridge and Valley Region are note-worthy nesting records, along with the Red-cockaded Woodpecker from the Central Plateau and Basin Region. Records of the Song Sparrow during the breeding season appear to be more numerous from the Plateau and Basin Region, where this species does not normally nest. Other notable observations include the Willet at Nashville, White-rumped Sandpiper at Austin Springs (Ridge and Valley), and summer records of the Ring-billed Gull and Black Tern at Watauga Lake (Mountain Region).

WESTERN COASTAL PLAIN REGION—*Herons-Sparrows:* Little Blue Heron: 17 May (2), 24 May (1). Golden-winged Warbler: 12 May (1). Pine Warbler: throughout season at two locations, two birds at each location. Mourning Warbler: 22 May (1), singing. Wilson's Warbler: 12 May (2). Blue Grosbeak: feeding young at two locations.

All observations from Savannah area.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Herons-Woodpeckers:* Great Blue Heron: 27 July (2) ACM (JHR). Little Blue Heron: 27 July, peak (10) ACM, 14-25 July (1) both (JHR). Common Egret: 27 July (1) ACM (JHR). Black-crowned Night Heron: 15 July (15+) BV (JHR). Yellow-crowned Night Heron: 18 July, peak (8) BV (JHR). Canada Geese: 22 July (15) banded and marked birds from nesting site of Game & Fish farther up OHL (LOT). Wood Duck: 29 June (73), 21 July (2) with small young, other records of young May, June, July, all RL (MCW, JHR). Sharp-shinned Hawk: all May BT (RH). Red-shouldered Hawk: (2-4) all period BT (RH). Broad-winged Hawk: (2-4) all period BT (RH), 5 July (1) SHV (JHR). King Rail: 3 June, nest (3) eggs GP (KHD). American Coot: 5 June (1) RL (MCW). Killdeer: to 21 July NA (JHR, LOT, HEP). Spotted Sandpiper: 27 July (1) LD (RTH). Solitary Sandpiper: 16 July (1), 18 July, peak (4) ACM (JHR). Willet: 1 May (1) ACM (AFG), 13 May (3) LD (RTH). Least Sandpiper: 9 May (2) OHL (LOT). Red-cockaded Woodpecker: 9 May, pair incubating Catoosa (KHD, Ken and Jan Leggett), 1 June, adult feeding (2) young PSP (RH).

Flycatchers-Waxwings: Eastern Kingbird: all season LD (RTH), above normal west NA (HEP). Acadian Flycatcher: nesting LD (RTH), below normal NA. Traill's Flycatcher: 17 May (3) WB (MCW). Olive-sided Flycatcher: 3 May (1) WC (MCW), 20 May (1) H (HCM). Purple Martin: 25 occupied boxed BT (RH), 21 June (84) LD (RTH), 24 June (200) Manchester (MCW), 5 July late nest fledged WB (MCW), scarce NA. Bewick's Wren: 8 July (6) LD (RTH), early May only BT (RH), scarce NA. Swainson's Thrush: 19 May (1) H (AT). Veery: 14-17 May (1) H (AT). Cedar Waxwing: 22 May (6) BV (JHR), 22 June (4) "feeding like flycatchers" BT (RH).

Warblers-Sparrows: Magnolia: 19 May (1) H (HCM). Cape May: 2 May (1) H (AT). Myrtle: 13 May (1) RL (MCW). Black-throated Green: 1, 22 June PSP (RH), 12 May (1) H both (AT) (GRM). Blackburnian: 12-13 May (1) H (AT). Chestnut-sided: 13 May (2) H (HCM) Blackpoll: 4 May (1) H (AT). Pine: 1 June, gathering nesting material, 6-22 June, singing PSP (RH). Ovenbird: 1 June common PSP (RH). Mourning: 1 May (1) RL (AT), 24 May (1) H (CWF, *fide* ARL). Wilson's: 12 May (2) RL (MCW). Canada: 12 May (2) RL (MCW), 23 May (1) H Columbia (GRM). Scarlet Tanager: (2) nesting pair BT (RH); 29 May (2), 9 June (1) LD (RTH). Summer Tanager: pair feeding young, assisted by pair Wood Thrushes BT (*fide* RH)! Rose-breasted Grosbeak: 22 May (1) H (SB). Blue Grosbeak: 7 June thru period (1) LD (RTH), 19 June (2) Tullahoma (MCW), 2 May (1) SHV (HEP), 17 June thru period (6+) with nest and (4) young 26 July Bellevue (PJM); 6 June (2) NT (JHR), 1 July (1) RL (LOT), 21 July (1) H (HCM). Dickcissel: 24 May (1) NT (JHR), 24 June (11) CC (KHD), only reports. Evening Grosbeak: 5 May (3), last wintering birds H (PJM); 7 May (3) LD (RTH). Grasshopper Sparrow: 24 June (10) CC, GC (KHD), 19 June (1) Tullahoma (MCW). Lark Sparrow: 6 May (1) LD (RTH). White-crowned Sparrow: 12 May (2) H (FM), 13 May (2) LD (RTH). White-throated Sparrow: 16 May (1) WB (MCW), 5 May (3) H (HCM). Song Sparrow: thru period three locations BT (RH), 23 June (3) Tracy City (KHD), (3) pair CK thru period *fide* (MW), 22 June thru 13 July (1) McMinnville (MCW).

Locations: ACM—Ashland City Marsh, BV—Buena Vista, BT—Byrdstown, CC—Coffey Co., CK—Cookeville, GP—Goose Pond, GC—Grundy Co., H—Home Area, LD—Lilydale, NA—Nashville Area, NT—Old Natchez Trace Rd., OHL—Old Hickory Lake, PSP—Pickett State Park, RL—Radnor Lake, SHV—South Harpeth Valley, WC—Warren Co., WB—Woodbury.

Observers: SB—Sue Bell, KHD—Kenneth Dubke, CWF—Clara Fentress, AFG—Albert Ganier, RH—Robbie Hassler, RTH—Roy Hinds, ARL—Amelia Laskey, GRM—George Mayfield Jr., PJM—Pauline J. Miller, FM—Fanny Murphy, HEP—Henry Parmer, JHR—John and Heather Riggens, AT—Anne Tarbell, LOT—Laurence Trabue, MW—Marie White, MCW—Mary Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION—*Grebes-Ospreys:* Pied-billed Grebe: 24 June (1) HRA (KD). Little Blue Heron: 23 July (1) K

(BL). Common Egret: 24 June (1) HR (KD). Black-crowned Night Heron: 4 May (1) AM (KD), 5 July (2) AS (PR, CRS). Least Bittern: two nests AM (KD). American Bittern: 1, 6, 10 June (1-3) AM (KD). Lesser Scaup: 18 May (1) AS (WC, TH, PR, CRS). Canada Goose: through period (3) HRA (KD). Bald Eagle: 26 May (1) ND (FO), 20 July (1) ChL (JD). Osprey: 1 active nest, ChL (KD), 2 active nests WBL (JMC). (none fledged in any nest).

Pheasants-Flycatchers: Ring-necked Pheasant: 31 May (1 hen, 4 young) CC (JMC, MW). King Rail: two nests, AM (KD). White-rumped Sandpiper: 18, 19 June (1) AS (WC, CRS). Ring-billed Gull: last 16 May (1) HRS (KD, RB). Black Tern: 28 July (2) HRA (KD). Barn Owl: through period (2) AM (JD, KD). Yellow-bellied Flycatcher: 12 May (1) K (BL). Traill's Flycatcher: 16 May (1) K (FA), 16 May through period (2 active nests) HRA (RB, KD). Least Flycatcher: 12 May (1) K (BL).

Swallows-Juncos: Tree Swallow: through period (5 nests) ND (BJ). Bank Swallow: 16, 18, 26 June (1) (AS (WC, CRS). Warbling Vireo: through period (2) K (JMC). Blue-winged Warbler: all through June (1) CB (KD). Mourning Warbler: 15 May (1) K (FA). Wilson's Warbler: 12 May (1) K (BL). Evening Grosbeak: last 22 May (1) JC (LH). Pine Siskin: last 7 May (1) ND (FO). Grasshopper Sparrow: 15, 16 May (2) HRA (RB, KD). Slate-colored Junco: last 17 May (1) K (FA).

Locations: AM—Amnicola Marsh, AS—Austin Springs, CB—Chickamauga Battlefield, Ga., CC—Campbell County, JC—Johnson City, ChL—Chickamauga Lake, HRA—Hiwassee River Area, K—Knoxville, ND—Norris Dam, WBL—Watts Bar Lake.

Observers: FA—Fred Alsop, RB—Ralph Bullard, Jr., JMC—James M. Campbell, WC—Wallace Coffey, JD—Jon DeVore, KD—Ken Dubke, LH—Lois Herndon, TH—Tim Hawk, BJ—Ben Jaco, BL—Beth Lacy, FO—Frances Olson, PR—Pete Range, CRS—Chas. R. Smith, MW—Morris Williams.

James M. Campbell, 15 Hedgewood Dr., Knoxville 37918.

EASTERN MOUNTAIN REGION—*Egret-Raven:* Common Egret: 5, 7 June (1) WaL (WAB, LRH, PR). Turkey: 8 July (9) KMA (BY). Spotted Sandpiper: 24 May (1) TN (FA). Ring-billed Gull: 5 June (1) WaL (WAB, LRH, PR). Black Tern: 7 June (1) WaL (PR). Barred Owl: 24 May (1) CG (FA), throughout July (5) RHM (FA), 18 July (2) RM (WAB, CRS). Saw-whet Owl: 25 May (2) MO (FA). Yellow-bellied Sapsucker: 4 May (1) E (LRH). Olive-sided Flycatcher: 24 May (1) AR (FA), 26 July (1) HC (MS). Raven: 24 May (4) NG (FA), 26 June (2) RM, 20 July (1) RM.

Creeper-Junco: Brown Creeper: 21 May (1) E (LRH), 24 May (3) CD (FA), 22 June (2) CD (FA). Swainson's Warbler: 24 May (1) LC (JMC), 1 June (1) WS (FA). Blue Grosbeak: 1 June (1) CC (FA), first June record for The Smokies. Evening Grosbeak: 1 May (30) MC (WC, TMH), 15 May (4) E (LRH). Pine Siskin: 24 May (15) CD (FA), 14 June (1) RM (CRS). Red Crossbill: 14 June (3) RM (CRS), 22 June (7) CD (FA). Vesper Sparrow: 4 June (1) CR (JMC). Slate-colored Junco: 9 June (3) HM (WC, TMH), first known summer record for Sullivan Co.

Locations: AR—Arch Rock, Great Smoky Mountains National Park, CC—Cades Cove, GSMNP, CD—Clingman's Dome, GSMNP, CG—Collins Gap, GSMNP, CR—Cataloochie Ranch, N. C., E—Elizabethton, HC—Heaton Creek, HM—Holston Mtn., KMA—Kettlefoot Wildlife Management Area, LC—Laurel Creek, GSMNP, MC—Mountain City, MO—Morton Overlook, GSMNP, NG—Newfound Gap, GSMNP, RHM—Rich Mtn., TN—Townsend, WaL—Watauga Lake, WiL—Wilbur Lake, WS—White Oak Sinks, GSMNP. *Observers:* FA—Fred Alsop, WAB—Bill Bridgforth, JMC—Jim Campbell, WC—Wallace Coffey, LRH—Lee R. Herndon, TMH—Tim Hawk, PR—Pete Range, CRS—Charles R. Smith, MS—Maxie Swindell, BY—Bill Yambert.

Charles R. Smith, Route 2, Johnson City 37601.

IN MEMORIAM

Otho C. Ault

It is almost a year now since Dr. Otho C. Ault left our known world (Sept. 1, 1968, to be exact), but we never walk among our irises, so many of which came from his and "Miss Gertrude's" garden, but that we think of him —or when we tend the oakleaf lettuce, or check the growth of the red buckeye.

Although he taught economics for many years, he was a "born" botanist—no green growing thing escaped his eye or interest. His vegetable garden was a thing of beauty and a joy to all the lucky recipients of its products. He was most generous with the fruits of his efforts.

One of the fine things he did for our Nashville T.O.S. Chapter was to locate and classify the wildflowers of our Two Jays sanctuary. He was also treasurer of the Two Jays Fund.

Dr. Ault was born in Van Wert County, Ohio, received his A.B. degree from Defiance College, his Masters from the University of Chicago, and his Ph.D. from the University of Wisconsin. He taught four years at the University of Florida before joining the Peabody faculty in Nashville in 1919. He retired in 1947. He was the author of several textbooks and, to quote the Nashville Banner of Sept. 2, 1968, "He was one of the most colorful teachers at Peabody during its period of greatest growth."

He enjoyed his retirement for he had so many hobbies, chief among them nature study. He was always on the alert for something new to him in the world of nature, and he enthusiastically shared his discoveries with others.

—Kirby and Ellen Stringer

Robert J. Dunbar

Friends and T.O.S. members lost an active member and companion in the death of Bob Dunbar in April, 1969. He lived life to the fullest and proved that you were never too old to enjoy new adventures. Before coming to Oak Ridge, Tennessee in October, 1942, as the first civilian to set up operations for the Manhattan Project, he had already completed many milestones. A Navy veteran of World War I, he worked his way through college to become distinguished in the field of engineering. While living in Oak Ridge, he was an active citizen, organizing the Oak Ridge Sportsman's Club, being an advisor to an Explorer Boy Scout Troop, ardent bird student and participant in bird counts, and a proficient marksman. He enjoyed the hobby of collecting and assembling antique guns and was a three-time National Champion in muzzle-loading pistols. He continues to hold the national record for the ball and cap revolver for 50 yards.

After the death of his wife, Clara, in 1963, he renewed his interest in photography and became a world traveler. His trips took him to East Africa, Japan, the Amazon basin, Lapland and the Scandinavian countries, two trips to Antarctica, Easter Islands, Galapagos Islands, Alaska and many of our own United States, several of these trips in the company of Roger Tory Peterson. Bob Dunbar contributed much to Knoxville Chapter T.O.S. and his fellowship and participation in programs and club activities are already missed. But we are all much richer in that we shared a part of his life just in knowing him.

—Mrs. George W. McGown

Jennie Riggs

Miss Jennie Riggs, naturalist, conservationist, ornithologist, and serologist, left her mark on the lives of many when she past to her reward in March 1969. She was born in the Appalachian Mountains of Kentucky which provided a natural setting for what was to become her primary interest, the great outdoors and all that nature had to offer.

An inspiring naturalist, ever ready to share with others her knowledge gained by study and field trips, she became widely known as a leader in the field of animal and plant life. Becoming a member of the Tennessee Ornithological Society some twenty years ago, she held various offices during the period. Almost in keeping with the old slogan "—rain nor snow nor storm or night—" it could be said of Miss Jennie that she stood ready at all times to assist someone with bird study or go on a field trip. She found considerable contentment in just getting out where she could commune with nature and get away from the rigors of the every-day routines.

At the time of her death, Miss Jennie had accumulated a priceless library which was donated to the Childrens Museum at Nashville. This was another of many marks of her generous spirit—that of sharing with others—not only her knowledge on many subjects, but also of what she had been able to accumulate of the world's goods.

She was a conservationist in the truest sense of the word. Streams, forests and their environs were of genuine interest to her and whether at work or play, she was ever conscious of making the most use of what she had.

As Chief of the State of Tennessee Serology Laboratory from its inception in 1934 until her death, she constantly employed techniques and procedures resulting in rapid growth, outstanding success, and the eventual attainment of an enviable rating in the U.S.

Finally, the plant life, the birds, the mountains and streams echo her sentiments—God created it all and put it here for our pleasure. Let us therefore protect as well as enjoy it.

—Frances Abernathy

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, specific, and descriptive.

STYLE: Recent issues of THE MIGRANT should be used as a guide in the preparation of manuscripts. Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N. W., Washington, D. C. 20016.

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SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

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A STUDY OF FALL MIGRATORY BIRD POPULATIONS IN SEWAGE PONDS

By Earl L. Hanebrink and Allen Rhodes

Introduction

This study of waterfowl and associated shorebirds was conducted on sewage lakes in Craighead County, Arkansas during the Fall migration beginning on 20 September, and terminating on 13 December. The census area consists of three lakes of 56 acres surface area (Fig. 1). The largest lake is 40 acres and the smaller two of 8 acres each. These lakes are located 0.4 miles south of Highway 63 and 0.1 mile from the city limits of Nettleton, in a primarily agricultural area. There are fields devoted to crops on the northwest and southeast sides of the lakes with open woods and farm lots on the other two sides. The fields are primarily planted in soybeans and cotton and the open woods have stands of oaks (*Quercus* spp.) with Broomsedge (*Andropogon virginicus*) and Johnson Grass (*Sorghum vulgare*) intermingled with other common weeds and grasses.

These sewage disposal lakes serve primarily as a resting stop for migratory birds during the spring and fall migration since little food is readily available in the area. There is neither an adequate area of exposed mud flats for shorebirds nor an area of flooded timber where ducks or shorebirds might feed. The lakes support a very high population of algae and zooplankton which provide food for certain aquatic bird species.

Methods

Migratory birds associated with these sewage lakes were counted two or three times each week during the Fall of 1968. Total counts were made by using 7x50 binoculars and telescope during the early morning or late afternoon starting on 20 September, and terminating on 13 December. A total of 40 counts were made during the four months and summarized in Table 1.

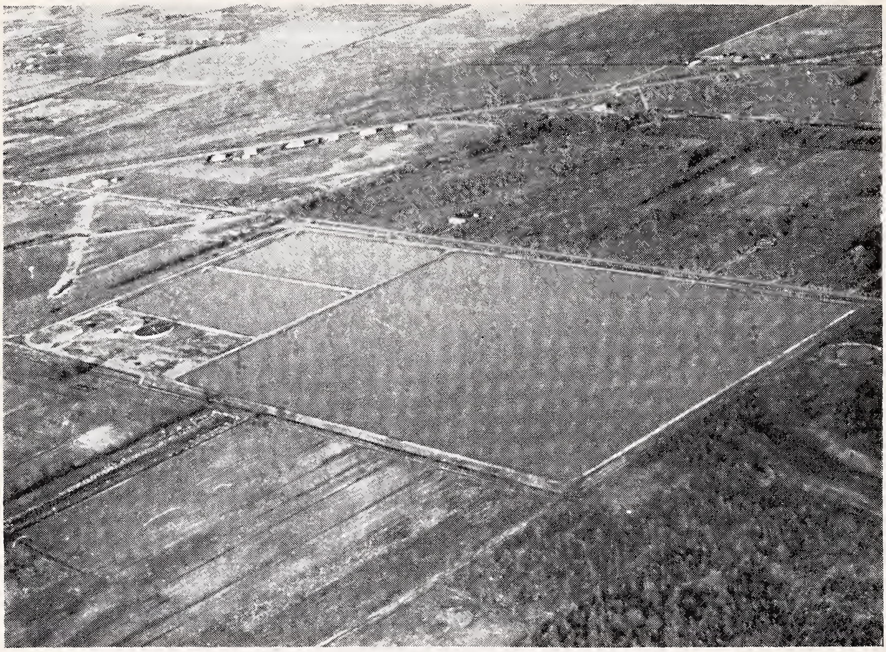

Fig. 1. Aerial photograph of study area.

RESULTS AND DISCUSSION

Populations and species composition fluctuated considerably during the fall migration. This fluctuation was usually correlated with weather conditions. The main migration can be seen from Table 1 to be concentrated in the first week in November, with numbers gradually declining in the following weeks. A very high population on 25 September is accounted for in part by the foggy overcast which gave poor visibility causing many flocks to sit down on the lakes until better weather occurred.

A total of 35 species of birds associated with these sewage lakes were sighted in 40 trips made to the area. A maximum of 17 species was seen on 6 November, and a low of four species on the 6, 9, and 13 of December. Total numbers ranged from a high of 631 on 6 November, to a low of 15 on 30 September. Most unusual for this area were the sighting of the Horned and Eared Grebes (*Podiceps auritus* and *P. caspicus*). Sixteen species of ducks used these lakes. Five species of gulls and terns were recorded. Immature Little Blue Herons (*Florida caerulea*), most likely from the Luxora Heronry in Mississippi County, traveled over 50 miles to this area from their nesting location and were observed feeding along the levees of the sewage ponds.

TABLE I

NUMBER OF BIRDS SIGHTED AT EACH OBSERVATION

Species	9/20	9/23	9/25	9/26	9/27	9/30	10/2	10/4	10/7	10/9	10/14	10/16	10/17	10/18	10/19	10/21	10/23	10/24	10/25	10/28
Common Loon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Horned Grebe	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eared Grebe	1	1	1	1	--	1	--	1	1	1	1	1	1	--	--	--	--	--	--	--
Pied-billed Grebe	2	2	2	1	--	--	--	4	--	--	--	--	--	--	--	12	9	--	3	--
Little Blue Heron	5	--	--	--	--	--	--	--	4	3	--	--	--	--	--	1	--	--	--	--
Blue Goose	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mallard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	6	--	--	10
Gadwall	--	--	--	--	--	--	--	--	3	--	3	13	8	9	76	40	10	23	11	9
Pintail	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	27	2	4	--
Green-winged Teal	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	10	2	--	1
Blue-winged Teal	15	--	406	17	6	3	2	13	4	12	11	14	20	5	8	8	8	4	--	2
American Widgeon	--	--	--	6	--	--	10	2	--	2	--	--	3	4	8	38	11	5	--	1
Shoveler	30	18	--	15	17	8	5	17	15	11	27	27	27	23	22	20	23	30	36	8
Wood Duck	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redhead	--	--	--	--	--	--	--	--	3	2	2	2	2	--	--	1	8	--	--	--
Ring-necked Duck	--	--	--	--	--	--	--	--	--	--	1	1	1	7	--	4	40	7	1	7
Canvasback	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--	--	--
Lesser Scaup	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	10	69	26	23	5
Bufflehead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ruddy Duck	--	--	--	--	2	1	--	1	--	14	12	6	11	10	10	13	18	20	71	23
Hooded Merganser	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Red-breasted Merganser	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	--	--	15	1	1	--	--	16	1	--	4	8	4	6	4	15	197	35	21	17
Killdeer	3	7	9	1	5	--	--	31	--	5	--	--	4	13	22	10	6	10	13	18
Common Snipe	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spotted Sandpiper	--	--	--	1	3	2	--	2	3	2	--	1	--	--	--	--	--	--	--	--
Solitary Sandpiper	--	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Greater Yellowlegs	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pectoral Sandpiper	--	--	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanderling	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ring-billed Gull	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Franklin's Gull	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bonaparte's Gull	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Forster's Tern	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black Tern	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE I (continued)

Species	10/30	11/1	11/3	11/4	11/6	11/7	11/11	11/13	11/15	11/18	11/20	11/22	11/25	11/27	11/29	12/2	12/4	12/6	12/9	12/13
Common Loon	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Horned Grebe	1	1	--	7	4	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eared Grebe	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pied-billed Grebe	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Little Blue Heron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blue Goose	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mallard	8	22	6	8	--	--	--	10	40	--	--	--	--	--	--	--	--	--	--	--
Gadwall	--	9	6	8	6	13	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Pintail	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Green-winged Teal	--	--	--	8	4	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blue-winged Teal	6	15	13	4	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Widgeon	--	1	1	5	--	2	5	4	--	--	--	--	--	--	--	--	--	--	--	--
Shoveler	9	50	23	20	25	7	20	12	19	--	--	--	--	--	--	--	--	--	--	--
Wood Duck	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redhead	1	3	3	--	20	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ring-necked Duck	16	--	40	82	80	75	25	10	14	19	10	21	5	11	11	28	4	6	--	--
Canvasback	5	5	5	6	10	7	1	1	1	1	--	--	--	6	--	1	--	--	--	--
Lesser Scaup	8	75	200	150	365	260	25	4	10	25	10	19	53	30	13	50	16	3	12	10
Bufflehead	--	--	--	1	1	1	--	--	1	--	2	--	--	--	--	--	--	--	--	--
Ruddy Duck	22	24	63	104	60	81	42	62	60	60	50	62	34	38	37	41	32	20	12	14
Hooded Merganser	--	--	--	--	1	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--
Red-breasted Merganser	--	--	1	1	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	6	5	63	31	31	50	14	6	5	5	12	--	--	--	--	--	--	--	--	--
Killdeer	2	8	4	11	5	12	5	5	3	5	--	8	2	--	5	--	--	--	1	--
Common Snipe	--	--	--	--	--	--	2	--	1	--	--	--	--	--	--	--	--	--	--	--
Spotted Sandpiper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Solitary Sandpiper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Greater Yellowlegs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pectoral Sandpiper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanderling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ring-billed Gull	--	--	--	--	3	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Franklin's Gull	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bonaparte's Gull	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Forster's Tern	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black Tern	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE II

FREQUENCY AND HIGHEST NUMBER PER SPECIES IN ONE COUNT

Name of Bird	Frequency	H. No./Day
Common Loon	1	5
Horned Grebe	5	7
Eared Grebe	11	1
Pied-billed Grebe	9	12
Little Blue Heron	4	5
Blue Goose	1	1
Mallard	10	40
Gadwall	20	76
Pintail	5	27
Green-winged Teal	7	17
Blue-winged Teal	23	406
American Widgeon	17	38
Shoveler	38	50
Wood Duck	1	5
Redhead	13	21
Ring-necked Duck	26	82
Canvasback	11	10
Lesser Scaup	26	365
Bufflehead	5	2
Ruddy Duck	34	104
Hooded Merganser	2	2
Red-breasted Merganser	3	10
Marsh Hawk	1	1
Osprey	1	1
American Coot	25	197
Kildeer	29	31
Common Snipe	2	2
Spotted Sandpiper	7	3
Solitary Sandpiper	2	2
Greater Yellowlegs	1	1
Pectoral Sandpiper	1	8
Sanderling	1	1
Ring-billed Gull	2	3
Franklin's Gull	2	1
Bonaparte's Gull	1	4
Forster's Tern	1	1
Black Tern	1	2
Belted Kingfisher	2	1

Frequency and highest number of each species is presented in Table 2. Species with the highest frequency were the Shoveler (38), Ruddy Duck (34), Killdeer (29), Ring-necked Duck (26), Lesser Scaup (26), and American Coot (25). The largest number of a species recorded on a single count was 406 Blue-winged Teal recorded on 25 September.

ACKNOWLEDGMENTS

Dr. Bob Johnson and Kenneth Beadles of the Department of Biology, Arkansas State University critically read the manuscript.

ADDENDUM

Three additional species of ducks were recorded from the sewage ponds during the 1969 fall migration. One male Oldsquaw (*Clangula hyemalis*) was observed on these ponds from 25 November until 30 November 1969. There are few records of this species recorded for the state. Two male White-winged Scoters (*Melanitta deglandi*) were observed on these ponds from 2 November until 26 November 1969. The Common Scoter (*Oidema nigra*) was also observed at this location. Two females were observed from 28 October until 30 October 1969. This sighting is a state record for this species (D. James, personal communication). Verifying documentation of extraordinary sight records were completed and sent to Dr. Douglas James at the University of Arkansas where a permanent file is kept for the state. This species was first seen by Mrs. John Ellis and several members of the Northeast Arkansas Audubon Society had the opportunity to observe this record. Species of Scoter ducks are rarely recorded this far inland from coastal areas. There are very few records of the White-winged Scoter in Arkansas (D. James, *Proc. Ark. Acad. Sci.*, 18: 20-30, 1964). Arkansas now has records of the White-winged Scoter, the Surf Scoter and the Common Scoter .

Arkansas State University, State University, Arkansas 72467.

AUTUMN 1969 T. V. TOWER CASUALTIES AT NASHVILLE

By Amelia R. Laskey

The collection of T. V. Tower casualties in autumn 1969 in Nashville was well organized under the leadership of M. L. Bierly, starting in late August and continuing until mid-November with the help of several others. The birds were brought to me, counted, listed and then frozen for future studies.

The first casualty was a Kentucky Warbler on 22 Aug. The total number killed was 1,909 of 70 species—307 (51 species) at WSIX and 1,602 (57 species) at WSM.

Excepting a Starling on 7 Sept. and an American Redstart on 10 Sept., no birds were found until 18 Sept. when 62 were gathered at the two towers and on 19 Sept. a total of 200. Northerly winds, subnormal mean temperatures, overcast skies and a passing cold front prevailed at this period.

The largest kill occurred on the night of 14-15 Oct. during a similar weather period. On that night there were 139 casualties at WSIX and 1,172 at WSM. After a telephone call at 21:30 14 Oct. from Mr. Clark Sewell, on night duty at WSM, M. L. Bierly, John Riggins, K. A. Goodpasture and A. R. Laskey collected 152 birds as they fell before midnight where they could be seen on the lighted concrete parking place southeast of the tower. The others were gathered from the grass and wooded area on the morning of 15 Oct. Among them were 254 Tennessee Warblers, 220 Ovenbirds, 206 Bay-breasted Warblers, 162 Magnolia Warblers and 115 Chestnut-sided Warblers.

In late October there were few casualties and from 1 Nov. through 12 Nov., only 27 at both towers. From 12 Nov. to the termination of the visits on 16 Nov., none was found.

Compared with previous records for early fall arrival and late departure of migrants, the following are of note: Golden-winged Warbler, 15 Oct.; Cape May Warbler, 14 Oct.; Black-throated Blue Warbler, 19 Sept.; Blackpoll Warbler, 15 Oct. (7 found at the two towers); Hooded Warbler, 16 Oct. (one at each tower).

The list for the two towers follows with the first numeral indicating WSIX and the second number WSM. An asterisk (*) indicates that the species was found only at WSM.

Sora 2; Yellow-billed Cuckoo 3; Black-billed Cuckoo 1*; Whip-poor-will 1-2; Yellow-shafted Flicker 1*; Yellow-bellied Sapsucker 2-1; Great Crested Flycatcher 1; Yellow-bellied Flycatcher 1-1; Acadian Flycatcher 1-1; E. Wood Pewee 1-2; Red-breasted Nuthatch 1-2; Brown Creeper 1-2; Winter Wren 1; Long-billed Marsh Wren 1-3; Catbird 4-12; Brown Thrasher 1; Robin 2*; Wood Thrush 16; Hermit Thrush 1; Swainson's Thrush 13-5; Gray-cheeked Thrush 18-1; Golden-crowned Kinglet 4-13; Ruby-crowned Kinglet

3-9; Starling 1*; White-eyed Vireo 1-4; Yellow-throated Vireo 2*; Solitary Vireo 1*; Red-eyed Vireo 8-53; Philadelphia Vireo 2-14; Black-and-white Warbler 6-38; Golden-winged Warbler 1*; Tennessee Warbler 32-351; Orange-crowned Warbler 1-4; Nashville Warbler 7*; Parula Warbler 1*; Magnolia Warbler 17-204; Cape May Warbler 1; Black-throated Blue Warbler 3*; Myrtle Warbler 9-5; Black-throated Green Warbler 11-66; Blackburnian Warbler 10-53; Yellow-throated Warbler 1*; Chestnut-sided Warbler 8-126; Bay-breasted Warbler 41-246; Blackpoll Warbler 2-8; Palm Warbler 10-13; Ovenbird 25-249; Northern Waterthrush 4-4; Kentucky Warbler 3*; Connecticut Warbler 1*; Yellowthroat 7-14; Yellow-breasted Chat 4*; Hooded Warbler 2-3; Canada Warbler 1*; American Redstart 9-14; Bobolink 15; Brown-headed Cowbird 1; Scarlet Tanager 1-3; Summer Tanager 1-3; Rose-breasted Grosbeak 7*; Indigo Bunting 6-16; Dickcissel 1*; Pine Siskin 1; Grasshopper Sparrow 1*; Slate-colored Junco 2*; Field Sparrow 2-1; White-crowned Sparrow 1; White-throated Sparrow 1-2; Swamp Sparrow 4-3; Song Sparrow 2; Unidentifiable on account of condition 5-5.

Grateful acknowledgment for their help is extended to M. L. Bierly, C. W. Fentress, K. A. Goodpasture, J. D. Parrish, John Riggins, L. O. Trabue and the personnel of WSIX and WSM T. V. towers.

The following correction should be made for the 1968 report on autumn casualties: *Migrant,* 40:25, paragraph 3, line 3: delete 311 Blackpoll Warblers, substitute 319 Black-and-white Warblers.

1521 Graybar Lane, Nashville 37215.

NOTICE TO MEMBERSHIP

Dues for 1970 are now payable. Payment should be sent to the Treasurer, Kenneth H. Dubke, 3302 Navajo Drive, Chattanooga, Tennessee 37411, as soon as possible. Your cooperation will be appreciated.

EASTERN BLUEBIRD NESTING IN 1969 AT ASHLAND CITY

By Amelia R. Laskey and Martha F. Herbert

For the 1969 nesting season of Eastern Bluebirds (*Sialia sialis*) in the Neptune Community of Ashland City, John S. Herbert has increased the number of nest boxes to 70, placed on the wooden fence posts on nine miles of rural road. Regular weekly inspections were started on 5 March by M. F. Herbert and A. R. Laskey and terminated in September when the last brood fledged. The nestlings and six females were banded. In addition, eight females were trapped which had been banded as nestlings in 1968. One of these was nesting in the same box in which she had been hatched; the others were in boxes from 0.5 to 1.5 miles from the boxes in which they had been hatched.

Nest-building started in late March; first eggs were laid 2 April, with the peak on 12 April when 45 nests contained eggs. Three nests had complete sets of six eggs; 14 had sets of five eggs. In early June, one tiny yolkless egg was laid in a new nest, but was abandoned immediately. This year House Sparrows (*Passer domesticus*) were not as troublesome as in 1968. They were persistant at only three boxes, but we removed all nests and eggs. There were two Carolina Chickadee (*Parus carolinensis*) and one Tufted Titmouse (*Parus bicolor*) nesting attempts, all unsuccessful.

Of the 70 available nest boxes, 62 were used at least once by E. Bluebirds. Eggs laid, 708 (166 sets); eggs hatched, 340; young fledged 273 (39% of number laid); unsuccessful eggs and young 435 (61%). The number of unsuccessful eggs and young is discouraging and all evidence has been carefully tabulated. The heaviest loss is due to predation (188 in 49 nests). Robbed nests were intact as typical in snake predation.

A puzzling feature was the building of new nests over newly-laid clutches of eggs (91 eggs in 22 nests). This might be caused by contentions between bluebirds over the nest box, by the death of the female or other disturbances. We know that cats killed some females in their nesting environment. However, as we live 30 miles from the nesting area, it has been impossible to make the necessary observations to learn the cause of this behavior. The obvious procedure is to move the nest boxes with the great number of failures (seven in each of two boxes).

During the heat of summer, 104 eggs of 35 nests in boxes exposed to sunshine, were abandoned and usually found to be addled. During this period, young in the nests were protected to some extent by covering the box top with aluminum foil which reduced the inside temperature. Covering boxes containing eggs may be beneficial and should be tried in the next nesting season.

Small numbers disappeared from 32 broods in nests that successfully fledged young. These were doubtless removed after death by the parents. Seven young were found dead in five nests; four hatching young were eaten by predatory ants; four eggs failed to hatch when the incubating female died on the nest from pesticide poison; four nestlings died when the box was blown down in a windstorm. The fifth of the brood survived when placed with a brood of similar development.

Thanks are due to Mrs. Boyd Bogle, Jr. and Mrs. W. A. Puryear for checking the nests on 23 May.

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611 Lynbrook Rd., Nashville 37215.

THE RING'S INDEX ORNITHOLOGORUM

The editor of the International Ornithological Bulletin *The Ring* proposes to publish an Index Ornithologorum embracing the professional and amateur ornothologists of the world.

All entries should be in English and should be accompanied by one International Postal Reply Coupon for further correspondence. Closing date for all entries is 30 June 1970, but earlier arrival of entries would be appreciated. Do not delay—send your entry today.

The address is: The Editor, *The Ring*, Laboratory of Ornithology, Sienkiewicza 21, Wroclaw, Poland.

An entry (in English) should contain the following information:

1. Surname
2. Names in full
3. Year of birth (optional)
4. Title
5. Positions held (including editorships, memberships and the like)
6. Principal interest in ornithology
7. Address
8. Authors of ornithological publications are requested to quote the most important of them.
9. Do you intend to purchase a copy of the *Index* if reasonably priced?
10. One I.P.R. Coupon is enclosed: ☐ Yes ☐ No

DATE ____________________

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ROUND TABLE NOTES

BLACKBIRD ROOST AT COLUMBIA—During early December, 1969, a large Robin roost began to form rapidly in the vicinity of Reservoir Hill just west of downtown Columbia, Tennessee. Within about two weeks, the usual varieties of blackbirds also begun to use the roost and by Christmas the roost had grown to enormous proportions. At the time of our Christmas count, by crude estimate, we listed 500,000 Starlings, 400,000 Common Grackles, 300,000 Red-winged Blackbirds, 100,000 Brown-headed Cowbirds, 200,000 Rusty Blackbirds, and about 150,000 Robins. It is known from observations elsewhere in the area that a few Brewer's Blackbirds are also present in the area. The Robins have generally used the western edge of the roost but overlap the various blackbird types along the fringe of their roosting area. This roost site was used in 1960 and 1961 and a year later a site was chosen about two miles south of town on "Rainey's Hill." Then for about five years the bulk of these birds are known to have roosted in a large cedar thicket one mile southeast of the center of Lewisburg, Tennessee, because actual flyways of birds originating west of Columbia, were followed eastward by plane to the Lewisburg roost. It would appear that some flyways extend out as far as 50 miles from these roosts in central Tennessee. Last spring prior to the breaking up of the Lewisburg roost, Delton Porter, who frequently birds with me, noticed quite a number of Starlings suddenly falling as they flew into the roost in the afternoon, all of which were dead upon hitting the ground. He called this observation to my attention at the time and I suggested the possibility of some disease such as a fungus disease, known to be present in bird roosts, or the possibility of starvation late in the winter when food would be more scarce as the cause of these unexplained deaths which must have been rather numerous. It is interesting that the very next winter, the birds chose a different roost site which had not been used for about 6 years. A small blackbird and Robin roost is also present just east of the airport at Lewisburg this year, but the number of birds is apparently measured in thousands rather than hundreds of thousands.

George R. Mayfield, Jr., Maury County Hospital, Columbia 38401.

LEAST SANDPIPERS AND WATER PIPITS DURING WINTER AT ARROW LAKE—While routinely checking Arrow Lake on 27 December, 1969, for our Christmas bird count, I discovered a flock of very small sandpipers which were ultimately determined at close range to be Least Sandpipers, eight in number. These were carefully checked at close range to determine if any Semipalmated Sandpipers might be present, but none was found. Shortly after this a flock of birds resembling small larks was noted and when carefully observed was found to be Water Pipits, seven in number. Both flocks of birds were using the dry bed of Arrow Lake, which was less than half-filled at the time, leaving a large dry flood plane composed of mud and marshy grass, partly frozen. Although Least Sandpipers are commonly seen in the fall and spring, this is the first observation during the month of December or in the winter months in Columbia during the last 10 years of which I am aware. Water Pipits are never a common finding in Maury County and I am sure that this is only our second observation during the last 10 years. The other sighting consisted of a single bird seen in the spring several years ago near a large pond one-half mile east of the Daniel Gray residence.

George R. Mayfield, Jr., Maury County Hospital, Columbia 38401.

CLAY-COLORED SPARROW IN HARDIN COUNTY—A Clay-colored Sparrow (*Spizella pallida*) flew into a mist net near Olive Hill, 13 miles east of Savannah, Tennessee, about 07:00, 17 October, 1969. The site was on the east bank of Indian Creek, about 1,500 feet downstream from the Highway 64 bridge. Dominant vegetation at that spot is Black Willow (*Salix nigra*), growing thickly but not much more than three to four feet tall. Other bird species in the nets at that hour included Myrtle Warblers and Lincoln's, Swamp, and Song Sparrows (*Dendroica coronata, Melospiza lincolnii, M. georgiana,* and *M. melodia*).

This sparrow was about the same size as a Chipping Sparrow (*Spizella passerina*) and resembled a first-fall-and-winter Chippy, but we noticed the following differences: In general the coloration was paler than an immature Chippy, and there was no trace of rufous edging on the crown feathers. The stripe through the eye was less distinct than would be expected in a Chippy. There was a hint of the broad, light crown stripe of the breeding Clay-colored. A grayish "collar" about the back of the neck was evident in some postures. No gray rump showed at any time except by disturbing the plumage. These differences were slight, and few would be noticable except with the bird captive.

We compared the sparrow with the descriptions and measurements in Roberts (1955) and with the illustrations in Peterson (1961) and Robbins, Bruun, and Zim (1966). The plumage matched Roberts' description of *S. pallida* very closely, with appropriate allowance for immaturity. The tail was diagnostic, with a light edging around the grayish-brown feathers and the central pair much shorter, narrower, and more acutely pointed than the others.

It seemed to be comfortable in captivity, feeding and drinking freely, and not becoming excited nor attempting to escape. We considered holding it until it gained its breeding plumage, when its appearance would be distinctive enough to permit identification from a photograph, but it died during the night. Dissection showed the bird to be a first-year male. We found no fat deposits. The internal organs appeared healthy, and we could not ascertain the cause of death. The weight before skinning was 7.8 grams, the wing chord was 59 mm., the tail length was 60 mm., and the bill was 6 mm. from nostril to tip. For positive identification we prepared a study skin and sent it to the United States National Museum, where Mrs. Roxie C. Laybourne found it to be *Spizella pallida*. The skin is now loaned to the Ganier collection, number 1864.

There seems to be no documented Tennessee record of Clay-colored Sparrow. The breeding range extends east to Wisconsin and Michigan, and the winter range extends as far east as southern Texas, so migration in small numbers through western Tennessee seems plausible. The A.O.U. Checklist (1957) includes casual records from Ohio, Mississippi, Florida, and South Carolina, and "taken in breeding season in Illinois (Urbana) and Indiana (Dune Park)." Bent's more liberal distribution also includes New Jersey, Maryland, Virginia, North Carolina, Georgia, Alabama, and Louisiana. Tyler (1933) reported a sight record of Clay-colored Sparrow in Johnson City, Tennessee.

Albert F. Ganier, Katherine A. Goodpasture, Amelia R. Laskey, and Mike Bierly studied this bird with us while it was still alive, and they later offered important suggestions for this paper. We especially appreciated the study skin collection which Mr. Ganier, the T.O.S. Curator, has assembled.

LITERATURE CITED

American Ornithologists' Union. 1957. The Check-list of North American Birds.

Bent, A. C. 1968. Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows, and Allies. U. S. Nat. Mus. Bull. 237. 3 vol.

Peterson, R. T. 1961. A Field Guide to Western Birds. Houghton Mifflin, New York.

Robbins, C. S., B. Bruun, and H. S. Zim. 1966. Birds of North America. Golden Press, New York.

Roberts, T. S. 1955. Manual for the Identification of the Birds of Minnesota and Neighboring States. U. of Minn. Press, Minneapolis.

Tyler, Bruce P. 1933. Clay-colored Sparrow at Johnson City. The Migrant, 4:23.

DAVID E. AND MICHAEL PATTERSON, Harbert Hills Academy, Savannah 38372.

HARLAN'S HAWK AT CHATTANOOGA—On 16 and 17 January 1970, a single dark phase Harlan's Hawk (*Buteo harlani*) was observed by the writer and Miss Elizabeth Heideman in an abandoned agricultural area adjacent to the Amnicola Highway, approximately one mile southwest of Chickamauga Dam. The area where the sighting occurred is composed of weed fields, approximately thirty to fifty acres in size, which are bordered with large trees, many of which are dead and provide excellent perches for birds of prey. The area borders the Tennessee River. Rodent populations, especially rats and mice, are high. When first seen on 16 January, the bird was perched, facing the observers, in a small scrub tree in the middle of a field at approximately thirty-five yards distance. The deep grayish-black of the breast was very lightly mottled with what appeared to be a dirty white. The upper part of the under-tail was light grayish-white and became heavily mottled with the same grayish-black color of the body near the tip of the tail. The bird remained perched for approximately four minutes then flew away from the observers at about a forty-five degree angle. This provided an excellent opportunity to view the white lining of the primaries and secondaries as well as the white on the top surface of the tail. Both areas were mottled with the grayish-black color of the body. The only species with which there could arise some confusion is the dark phase Rough-legged Hawk (*Buteo lagopus*). However, this species has a distinct white, unmottled lining of the primaries and secondaries and an unmottled tail with a distinct dark terminal band. The bird was observed for about ten to fifteen minutes on 16 January, and about the same length of time on the morning of 17 January. All observations were made with 7x50 Bausch and Lomb binoculars. The light conditions both days were excellent, with the light gray of the sky and light brown of the fields providing a good background for observations. The writer observed this species once previously (*The Migrant* 37:73), on that occasion being called as a member of a group to confirm a report of this species.

According to records in *The Migrant* this sighting represents the sixth record of this species within the state and the second record for the Chattanooga area.

Jon E. DeVore, 4922 Sarasota Drive, Hixson 37343.

LOGGERHEAD SHRIKE NESTING IN CARTER COUNTY—An examination of the available literature reveals no record of a nest of the Loggerhead Shrike (*Lanius ludovicianus*) in Carter County. As of 1950, Herndon, in "Birds of Carter County, Tennessee" (*Migrant* 21:64), described the Loggerhead Shrike as a "rare winter resident", and reported that the period of its occurrence in that area was 20 August to 2 April ("extreme dates"). With this in mind, the following observations seem pertinent.

The author, accompanied by Dr. Lee R. Herndon, Pete Range, and Bill Bridgforth, discovered a nest of the Loggerhead Shrike near Wilbur Dam in Carter County, Tennessee, on 6 May 1969, approximately 4.5 miles east of the city of Elizabethton. The nest site was in a residential and farming area, with the immediate habitat consisting of old fields supporting a growth of broomsedge (*Andropogon* sp.), Red Cedar (*Juniperus virginianus*), and Black Locust (*Robinia pseudoacacia*), with occassional blackberry briars (*Rubus* sp.). Fence rows overgrown with honeysuckle (*Lonicera japonica*), Red Cedar, and Black Locust dissected the area. The nest was found along one of these fence rows within fifty feet of a paved road.

The nest was placed thirteen feet, seven inches above the ground in a Black Locust overgrown with honeysuckle. It contained five nestlings which were banded on 8 May 1969. The nest was saddled on a branch of the locust and supported primarily by strands of honeysuckle. The nest cup was lined with hair and rootlets; the outside of the nest included twigs, plant fibers, and white feathers (probably from chickens), and appeared loose and bulky. The nest dimensions were as follows: inside depth, 2.5"; inside diameter, 3.0"; outside depth, 6.0"; outside diameter, 5.0".

Charles R. Smith, Route 2, Johnson City 37601.

BACHMAN'S SPARROW IN LAWRENCE COUNTY—Early one morning during the week of 25-31 May 1969, while on a birding trip to my farm in western Lawrence County my attention was attracted by Bachman's Sparrows (*Aimophila aestivalis*) singing in a neighbor's pasture a few hundred yards away. Investigation disclosed some five or six males singing on territory in the area. This was not considered to be very unusual until several weeks later when study of late issues of *The Migrant* and discussion with Mr. David E. Patterson of Savannah indicated that this is a rather rare species in Tennessee.

Identification was positive, the "seeeee, slipslipslipslipslip" song being characteristic; one bird was viewed at close range in good light with 10x50 binoculars for several minutes. The larger and darker bill and the buffy breast easily separated the species from the Field Sparrow (*Spizella pusilla*) which was common in adjacent areas.

The habitat was around the point of a deciduous, brushy, second-growth, wooded hillside jutting into the rolling pasture land which sloped toward a small creek about one-fourth mile away. The pasture had been reworked with a bush-and-bog (heavy disc harrow) last year and reseeded to a good stand of fescue and white clover which was not grazed this year. The reworking process had left some short dead sprouts standing and the singing birds were using these for perches. The birds were surprisingly tame and could be approached to a very close range and then when disturbed they would usually fly to the brush in the adjacent wooded area instead of dropping into the grass as would be expected of most sparrows. The species most common to adjacent areas such as the Blue-winged and Prairie Warblers, the Yellowthroat and Yellow-breasted Chat and the Field Sparrow, were pretty well excluded over an area of several acres. The only intruder noted was an Eastern Wood Pewee which came and gave his plaintive whistle several times in a sapling just a few feet above my head.

From references available to me it is not possible to determine whether this colony is of the Bachman's (*A. a. bachmanii*) or the Illinois (*A. a. illinoisensis*) subspecies. The song was certainly more varied than that of the Bachman's race which I have observed in Northwest Florida and South Alabama. But song variation is probably no basis for separating the races. It is hoped that the colony can be studied in more detail in future seasons.

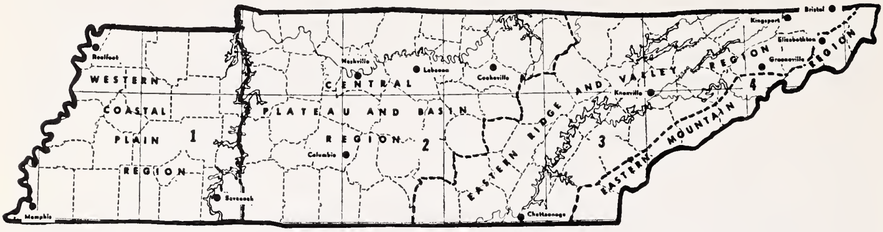
Lloyd Clayton, 6 Breeze Street, Gulf Breeze, Florida 32561.

A GOSHAWK AT NASHVILLE—A mature male of this species (*Accipiter gentilis*) was observed on 27 December 1969, during the course of taking the annual mid-winter bird census. A division of our party, consisting of John and Martha Herbert and the writer, found the bird at 09:00 perched near the top of one of a fringe of large oaks growing on a river bluff above the Cumberland River, at Davidson Creek 7 miles west of Nashville c.h. We were made known of its presence by a group of eight crows which noisily heckled it at a safe distance. At a distance of about 150 yards we observed it at leisure as it faced us in bright sunlight. Much larger than the crows and of very erect posture, its light gray streaked breast, bluish-slate sides, conspicuous black cheek patch and long tail, eliminated confusion with any other species. From its perch it could command a view of scrubby pasture land southward and grassy river bottoms to the north. The intervening creek prevented a closer approach. The Goshawk is a bold and fearless predator, making its summer home chiefly in Canada. It is an extremely rare fall and winter visitant and Nashville appears to be on the southward limit of its winter range. Over the many years there are eight Tennessee records; five from Nashville (*Migrant* 8:85, 11:1, 12:61, 16:63, and 36:8) and three from the Elizabethton area (*Migrant* 21:59). Robert Mengel, in his *Birds of Kentucky*, lists even fewer authentic records from that state.

Albert F. Ganier, 2112 Woodlawn Drive, Nashville 37212.

THE SEASON

Charles R. Smith, *Editor*



The months of August, September, and October exhibit an interesting weather pattern for the state. The one factor common to all three months was temperatures which were persistently colder than normal. Temperatures from each region for each month ranged from 1.9-3.3° F. colder than normal for the period; however, all regions of the state experienced essentially the same degree of cold over the three-month period, with a temperature range of 2.4-2.6° F. colder than normal for each region for the period. October was the coldest month with August being the warmest.

The Plateau and Basin Region experienced the least precipitation for the period. The western portion of the state received the greatest precipitation. This situation was due primarily to the heavy rainfall West Tennessee received on 18 and 19 August as a result of Hurricane Camille. Camille also contributed to the fact that August was the wettest month of the period, with most of the precipitation occurring in Middle and West Tennessee as a result of the influance of the hurricane. Precipitation for the eastern portion of the state was essentially normal for the period. October was the driest month for the state.

The most outstanding observation for the period was that of a Clay-colored Sparrow at Savannah. This constitutes the first collected specimen of that species in Tennessee. Identification was verified by the U. S. National Museum and the specimen is currently in the collection of the TOS Curator, Albert F. Ganier, at Nashville. Jerry Mathis and David and Mike Patterson were responsible for this observation. Other noteworthy observations include the following: Sandhill Crane, Buff-breasted Sandpiper, Western Kingbird, and Mourning Warbler from the Plateau and Basin Region; Pigeon Hawk, White-rumped Sandpiper, and Laughing Gull from the Ridge and Valley Region; Tree Sparrow and Lincoln's Sparrow from the Mountain Region.

WESTERN COASTAL PLAIN REGION—*Kite—Sparrows:* Mississippi Kite: 3 Aug. to 9 Sept. (4) R. Sharp-shinned Hawk: 10 Oct. (1) R. Bald Eagle: 17 Aug. (1). Short-billed Dowitcher: 5 Oct. (2) R. Sanderling: 5 Oct. (6) R. Great Horned Owl: all season (2) after no records for 2½ years. Yellow-bellied Flycatcher: 9 Sept. (1) and 13 Sept. (1) both banded. Red-breasted Nuthatch: 15 Oct.(5). Long-billed Marsh Wren: 18 Oct. (1). Short-billed Marsh Wren: 10 Oct. (1) tower casualty. Gray-cheeked Thrush: first 8 Sept. (1). Swainson's Warbler: 15 Oct. (1) tower casualty. Tennessee Warbler: only (9) banded 30 Sept. to 18 Oct. compared with

(96) same place and time last year. Orange-crowned Warbler: 18 Oct. (1). Louisiana Waterthrush: last 23 Aug. (1). Pine Siskin: unusually abundant, with (57) banded 27 Oct. to 5 Nov. and numerous small (to 25) flocks sighted. Tree Sparrow: 19 Oct. (1) R. Clay-colored Sparrow: 17 Oct. (1) verified by U. S. Nat. Mus. White-throated Sparrow: this species, much less abundant last winter than in previous ten years, is back in usual numbers, beginning 8 Oct. Lincoln's Sparrow: 16 and 17 Oct. (4).

Locations: R—Reelfoot Lake, remainder from Savannah.

Observers: Kenneth Leggett at Reelfoot; Jerry Mathis, David and Mike Patterson at Savannah.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Grebes-Ducks:* Horned Grebe: 20 Sept., (2) RL (MCW). Pied-billed Grebe: late, 18 Sept. (6) RL (MCW), 9 Oct. (8) OHL (LOT), 20 Oct. (11) RL (MCW). Great Blue Heron: 12 Sept. thru 20 Oct., (1-2) LD (RTH), few NA. Green Heron: last, 18 Oct. (1) at Manchester (MCW). Little Blue Heron: 17 Aug. (7) ACM, 20 Aug. (2) BV, both (MLB, JNR). Black-crowned Night Heron: 3 Sept. (1) WB (HB), few NA. Yellow-crowned Night Heron: 4 July to 10 Sept. (5) WB (HB). Canada Geese: 22 July (15), 8 Aug. (16) both OHL (LOT) (some with plastic collars of local breeding birds); no migrating flocks reported NA; 4 Oct. (9) LD (RTH), 13 Oct. (14) BT (DH, RH). Blue Goose: 31 Oct. (1) BL (HEP). Mallard and Black Ducks; scarce and late, first, 28 Oct. (2) of each, CL (LOT). Gadwall: first 5-30 Oct. (2-5) LD (RTH), 23 Oct. (115) WR (KD), 30 Oct. (20) BT (DH, RH). Blue-winged Teal: scarce, 20 Aug., (2), 25 Sept. (3), both BL (HEP), late were 31 Oct. (27) BT (DH, RH). American Widgeon: 1 Oct. (1) RL (MCW), 27 Oct. (55) WR (KD, JD). Shoveler: 17 Oct. (14) BT (DH, RH). Wood Duck: down to (6) 16 Oct. at RL (MCW), 4 Oct. (100) ACM (ROH). Redhead: 28 Oct. (6) CL (LOT). Ring-necked Duck: very early were (4) 8 Oct. RL (MCW), elsewhere late and scarce; 27 Oct. (784) WR (KD, JD). Lesser Scaup: first 23 Oct. (4) RL (MLB), 27 Oct. (8) RL (MCW), and (145) WR (KD, JD). Ruddy Duck: 23 Oct. (2) WR (KD), 28 Oct. (2) CL (LOT). Hooded Merganser: 28 Oct. (2) CL (LOT), 4 days earliest NA.

Hawk-Dove: Broad-winged Hawk: 25 Sept. (1) (MLB)*, last report. Bald Eagle: 5, 8, 18, 23, 28, 30 Oct. (1), 24, 26 Oct. (2), 31 Oct. (4), all LD (RTH). Marsh Hawk: 3 Aug. (1) ACM (HR, JR). Osprey: 16 Sept. to 10 Oct. (1-2) LD (RTH), 20 Sept. (3) NA. Sandhill Crane: 27 Oct. (113), 30 Oct. (21), BT (DH). Virginia Rail: 12 Oct. (1) (KAG*, MLB). American Coot: 18 Aug. (1) RL (MLB), 20 Sept. (2) ACM (AFG), 11 to 31 Oct. (200-400) LD (RTH), 27 Oct. (8500) WR (KD, JD), 31 Oct. (500) BT (RH, DH). Semipalmated Plover: 3 Aug. (1) ACM (HR, JR), 15 Aug. (1), 10, 13 Oct. (1) BL (HEP), 17 days latest NA. Killdeer: (25-30) BL during period. American Golden Plover: 15 Aug. (1), 13 days earliest NA, 1 Oct. (1), both (HEP). American Woodcock: 9, 31 Oct. (1) (MLB). Common Snipe: 4 Oct. (4) ACM (ROH), 30 Oct. (8) BT (DH, RH). Spotted Sandpiper: 8 Aug. thru period (1-4) BL (HEP), 14 Oct. (1) BT (DH, RH). Solitary Sandpiper:

last 17 Aug. (2) ACM (MLB). Greater Yellowlegs: 17 Aug. (2) ACM (MLB, JNR). Lesser Yellowlegs: scare, 17 Aug. (1) ACM (MLB, JNR), 10 Oct. (1) BL (HEP). Pectoral Sandpiper: 3 Aug. (1) ACM (JNR), 25 Sept. (5) (HEP), 27 Oct. (5) OHL (LOT). Least Sandpiper: 15 Aug. (5), (1-6) during period except 10 Oct. (9), all BL (HEP). Dunlin: 17 Oct. (1) to 31 Oct. (5), BL (HEP), 30 Oct. (10) BT (DH, RH). Semipalmated Sandpiper: 12 Aug. (4) (HEP), 14 Sept. (2) (MLB), both BL. Western Sandpiper: 15 Aug. (1), 13 Sept. (2) BL (HEP), second NA occurrence. Buff-breasted Sandpiper: 3 Aug. (1) ACM (HR, JR), fourth NA record. Herring Gull: 14 Oct. (6) LD (RTH), only report. Ring-billed Gull: 27 Oct. (3) WR (KD, JD) and (8) OHL (LOT). Bonaparte's Gull: 27 Oct. (2) OHL (LOT). Forster's Tern: 10 Oct. (1) found shot BL (HEP), dead about one day, 16 days latest NA. Black Tern: 17 Aug. (2), 19 Aug. (35) ACM (MLB, JNR), 20 Aug. (3) OHL (OT). Mourning Dove: 11 Sept. (2) young left nest CP (HCM).

Cuckoos-Wrens: Yellow-billed Cuckoo: last, 26 Oct. (1) (KAG). Black-billed Cuckoo: 21 Sept. (2), 29, 30 Sept. (1) LD (RTH). Common Nighthawk: 5 Sept. (952) 6 Sept. (402) then down to 27 Sept. (12), all migrating over TJ (MLB, HR, JR.); last, 13 Oct. (1) H (HCM). Chimney Swift: last, 17 Oct. (25) NA (LOT). Red-headed Woodpecker: few reports NA, 30 Oct. (30) Obey River Park, gone next day, (DH, RH). Yellow-bellied Sapsucker: 27 Sept. (1) TJ (ROH), 2 Oct. (3) WB (HB). Western Kingbird: 9, 11, 16 Oct. (2), 10 Oct. (3) LD (RTH). Yellow-bellied Flycatcher: 19 Sept. (1) (KAG) to 28 Sept. (1) (MLB). Acadian Flycatcher: 11 Oct. (1) (KAG). Traill's Flycatcher: 22 Aug. (1) (KAG), 3 days earliest NA, to 25 Sept. (1) (MLB). Least Flycatcher: 17 Aug. (1), 7 days earliest NA to 24 Sept. (1), both (MLB). (Note: all *Empidonax* flycatcher records are for banded birds) Wood Pewee: 9 Oct. (1) LD (RTH), very late was (1) 21 Oct. H (HCM). Olive-sided Flycatcher: 20 Sept. (1) RL (MCW), (2) FV (AC) 7 days latest NA. Tree Swallow: 20 Sept. (100) ACM (BG). Barn Swallow: last, 4 Oct. (1) DK (MCW). Purple Martin: 20 Aug. (3) CL (LOT), 1 Sept. (1) WB (MCW). Red-breasted Nuthatch: 9 Sept. (1) H (HCM), 29 Sept. (1), then (1-3) during period LD (RTH), 15-20 Oct. (1) WB (HB), 17 Oct. (2) BT (DH, RH). Brown Creeper: 18 Oct. (1) BT (DH, RH), 19 Oct. (1) TJ (KAG). House Wren: 20 Sept. (1) (MCW), last 12 Oct. (1) (KAG). Winter Wren: 11 Oct. (1) TJ (ROH), 12, 13 Oct. (1) H (HCM). Long-billed Marsh Wren: 28 Sept. (1) (KAG) and 17 Oct. (1) (MLB). Short-billed Marsh Wren: 24 Aug. (1) RR (HLB) and 10 Oct. (1) (KAG).

Mockingbird-Kinglets: Mockingbird: very late was (3) young leaving nest 4 Sept. CP (HCM). Wood Thrush: last NA 5 Oct. (1) H (HCM); late was (1) WB 18-25 Oct. (HB). Hermit Thrush: 9 Oct. (1) BT (DH, RH), 19 Oct. (1) TJ (KAG). Swainson's Thrush: late arriving, 18 Sept. (1) H (HCM) to 17 Oct. (1) (MLB). Gray-cheeked Thrush: 13 Sept. (1) (MLB) to 17 Oct. (1) (MLB) 5 days latest NA. Veery: 24 Aug. (1) (KAG), 10 days earliest NA to 25 Sept. (1) (KAG). Blue-gray Gnatcatcher: late, (1) WB (HB) 29 Sept., and 4 Oct. (1) CH (SB). Golden-crowned Kinglet: first, 15 Oct. (1) (KAG). Ruby-crowned Kinglet: 27 Sept. (3) (HB).

Pipit-Vireos: Water Pipit: 17 Oct. (1) BL (HEP), 27 Oct. (1) OHL (LOT), only reports. Cedar Waxwing: 14 Sept. (32) BT (DH, RH), 22 Oct. (7) WB (HB). Starling: still well below normal NA and BT. White-eyed Vireo: late was (1) 20 Oct. H (AT). Yellow-throated Vireo: last, 4 Oct. (1) (KAG, MLB). Red-eyed Vireo: last 11 Oct. (1) (MLB). Philadelphia Vireo: last, 11 Oct. (1) (MLB).

Warblers: Black-and-white: late was (1) 15 Oct. (KAG). Prothonotary: a late record, 24 Sept. (1) (MLB). Worm-eating: 30 Aug. (1) (MLB), last report: Golden-winged: 14 Aug. (1) H (HCM) earliest NA by 4 days; 11 Sept. (2) LD (RTH). Blue-winged: last 23 Sept. (1) (MLB). Tennessee: scarce, since generally most commonly seen fall warbler; 11 Sept. (2) H (ES) to 26 Oct. (1) (KAG). Orange-crowned: 8 Oct. (1) (MLB), 2 Nov. (1) (KAG). Nashville: 15 Sept. (1) H (CWF) to 18 Oct. (1) (KAG). Parula: last, 4 Oct. (1) (MLB, HR, JR). Yellow: last, 20 Sept. (1) (KAG). Magnolia: well below their usual large numbers NA; from 9 Sept. (1) H (HCM) to 17 Oct. (1) (MLB). Myrtle: very early at LD with (1) 17 Sept., then (2) 10 Oct. and up to (25) 18 Oct.; first NA (1) BL (HEP), 13 Oct., then 17 Oct. (1) BT (DH, RH). Black-throated Green: last, 17 Oct. (1) (MLB). Blackburnian: 9 Aug. (1) CH (SB), 24 Aug. (7) WB (HB), to 10 Oct. (1) RL (MLB). Yellow-throated: last, 11 Oct. (1) WB (MCW). Chestnut-sided: from 2 Sept. (1) H (HCM) to 10 Oct. (1) RL (MLB). Bay-breasted: from 18 Sept. (1) BS (KAG) to 20 Oct. (1) H (AT). Palm: scarce, last 22 Oct. (1) BL (HEP). Ovenbird: from 10 Sept. (1) to 17 Oct. (1), both (MLB). Northern Waterthrush: 10 Sept. (1) (KAG) to 17 Oct. (1) (MLB), both banded birds. Louisiana Waterthrush: 4 Sept. (1) banded (MLB), 2 days latest NA. Mourning: 4 Sept. (1) (MLB) and 10 Oct. (1) (KAG) for NA, 13 to 18 Sept. (1) WB (HB). Yellowthroat: last NA 16 Oct. (2) (KAG). Yellow-breasted Chat: still scarce NA, last 5 Oct. (1) (KAG). Hooded: last NA 26 Sept. (1) (KAG), 11 Oct. (1) WB (MCW). Wilson's: 29 Aug. (1) (MLB), 30 Aug. (1) WB (HB), to 17 Oct. (1) (KAG). Canada: 19 Aug. (1) H (HCM), 30 Aug. (2) WB (HB), 9 Sept. (1) CV (Thelma Tinnon), to 27 Sept. (2) (MLB). American Redstart: 14 Oct. (1) H (HCM).

Orioles-Sparrows: Orchard Oriole: 10 Aug. (2) adults with (2) young H (MLB), last report, 15 Aug. (15) WB (MCW). Baltimore Oriole: scarce, last report 23 Aug. (1) (MLB). Scarlet Tanager: from 31 Aug. (1) (MLB) to 15 Oct. (1) H (HCM). Summer Tanager: last 19 Oct. (1) H (HCM). Rose-breasted Grosbeak: from 13 Sept. (1) to 17 Oct. (2), both (MLB). Blue Grosbeak: numbers and nesting pairs still increasing NA; several late Sept. dates NA, with a new latest, 3 Oct. (1) (KAG, MLB), 14 days latest ever; other dates, 19 Sept. (1) WB (HB), 24 Sept. (1) LD (RTH), 17 Sept. (1) WC (MCW). Indigo Bunting: more NA than past two years. Dickcissel: 17 Oct. (1) (MLB), 25 Oct. (1) WB (HB). Purple Finch: 24 Oct. (1) WB (HB) seemed absent elsewhere. Pine Siskin: 23 Oct. (1) (KAG), 25 Oct. (100) (KAG, MLB), 27 Oct. (2) WR (KD, JD). American Goldfinch: below normal NA. Vesper Sparrow: 24 Oct. (15) WB (HB), only report. Slate-colored Junco: 4 Oct. (1) BT (DH, RH), and (1) H (HH) *fide* (ARL), then 14 Oct. (1) (MLB). White-crowned Sparrow: 28 Sept. (1) (KAG), 6 days earliest NA. White-throated Sparrow: 28 Sept. (1) CP (HCM), 8 Oct. (5) WB (HB), 14 Oct. (3) BT (DH, RH). Fox Sparrow: 17 Oct. (1) (MLB) first report. Lincoln's Sparrow: from 28 Sept. (1) (KAG), one day earliest NA to 31 Oct. (1) (MLB). Swamp Sparrow: first report, 26 Sept. (1) (KAG, MLB). Song Sparrow: 12 Aug. (1) WB (MCW), 4 Oct. (1) WB (HB), 5 Oct. (1) (KAG), first NA.

* Note—All records credited to KAG and MLB are at Two Jays Sanctuary unless otherwise stated.

Locations: ACM—Ashland City Marsh, BS—Basin Springs, BV—Buena Vista Marsh, BL—Bush Lake, BT—Byrdstown, CP—Centennial Park, CH—Center Hill, CL—Coleman's Lake, CV—Cookeville, DK—DeKalb, County, FV—Fernvale, H—Home area, LD—Lily Dale, OHL—Old Hickory Lake, RL—Radnor Lake, NA—Nashville Area, RR—River Road, NA, WB—Woodbury, WR—Woods Reservior, TJ—Two Jays Sanc.

Observers: SB—Sue Bell, MLB—Mike L. Bierly, HB—Mrs. Hoyt Bryson, AC—Annella Creech, JD—John DeVore, KD—Kenneth Dubke, CWF—Clara W. Fentress, AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, BG—Ben Grose, ROH—Roger O. Harshaw, DH—David Hassler, RH—Robbie Hassler, RTH—Roy T. Hinds, HH—Helen Hodgson, ARL—Amelia R. Laskey, HCM—Harry C. Monk, HEP—Henry E. Parmer, HR—Heather Riggins, JR—John Riggins, ES—Ellen Stringer, AT—Anne Tarbell, LOT—Laurence O. Trabue, MCW—Mary C. Wood.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION—*Loons-Merganser:* Common Loon: first, 21 Oct. (8) SHL (WC, JW). Double-crested Cormorant: 23 Oct. (1) HRA (WCa, MH). Little Blue Heron: regular to 13 Oct. (1 to 22) HRA (KD). Common Egret: regular to 25 Oct. (1 to 9) HRA (KD). Canada Goose: regular through period (4), first migrants 26 Sept. HRA (WCa, MH). Blue Goose: 22 Oct. (11), 28 Oct. (40) HRA (KD). Shoveler: 22 Oct. (1) HRA (KD). Wood Duck: max., 9 Sept. (396) HRA (KD). Red-breasted Merganser: 4 Oct. (2), 21 Oct. (1) SHL (WC, JW).

Hawks-Sanderling: Cooper's Hawk: 27 Sept. (1) SB (RS), 28 Sept. (1) Col (RS). Bald Eagle: 11 Aug. (1 immature) HRA (KD), 30 Oct. (1) SHL (JK). Marsh Hawk: max. 26 Oct. (3) HRA (JD). Osprey: regular through period (1 to 2) HRA (KD), (1 to 2) WBL (EBE). Pigeon Hawk: 28 Sept. (1) K (S, W). King Rail: 25 Sept. (1), 5 Oct. (1) AM (KD). Virginia Rail: 28 Sept. (1) K (TK). Black-bellied Plover: 22 Aug. (1) SB (KD), 28 Oct. (1) HRA (KD). Willet: 19 Aug. (1) HRA (KD), 2 Sept. (1) BVa (WC), first Bristol area record. White-rumped Sandpiper: 24 Oct. (1) SB (RS). Dowitcher (sp.): 22 Oct. (1) HRA (KD). Western Sandpiper: 16 Aug. (2), 22 Aug. (3), 28 Aug. (3) SB (KD), 1 Sept. (1) HRA (KD, 3 Oct. (1) AM (RS). Sanderling: 4 Oct. (1) SHL, Va. (WC, BR, JW).

Gull-Warbler: Laughing Gull: 19 Aug. (1 immature) HRA (KD). Forster's Tern: 28 Sept. (1) K (JTT). Common Tern: 19 Aug. (1) ChL (KD). Caspian Tern: 27 Sept. (1) HRA (RS). Black Tern: max. 17 Aug. (100) HRA (WCa, MH). Barn Owl: regular (1) AM (KD, RS). Bank Swallow: max. 24 Aug. (2000) HC (TK). Red-breasted Nuthatch:

first, 28 Sept. (1) Col (RS), 28 Sept. (50) K (KOS); common during October in all areas. Connecticut Warbler: 28 Sept. (1) K (HL, JM, RM).

Locations: AM—Amnicola Marsh, BVa—Bristol, Virginia, ChL—Chickamauga Lake, Col—Collegedale, HC—Hamblen County, HRA—Hiwassee River Area, K—Knoxville, SB—Savannah Bay, SHL—South Holston Lake, SHL,Va.—South Holston Lake, Virginia, WBL—Watts Bar Lake.

Observers: WCa—Wilford Caraway, WC—Wallace Coffey, JD—Jon DeVore, KD—Kenneth Dubke, EBE—E. B. Edwards, KOS—Knoxville Chapter TOS, MH—Melvin Hall, JK—Mrs. J. E. B. Kelley, TK—Tony Koella, HL—Helen Lewis, JM—Julia Moore, RM—Mrs. Ruth Moore, BR—Brent Rowell, RS—Roger Swanson, JTT—Dr. James T. Tanner, S,W—Mr. and Mrs. Louis Smith and Mr. and Mrs. Bill Williams, JW—Johnny Wood.

JAMES M. CAMPBELL, 15 Hedgewood Drive, Knoxville 37918.

EASTERN MOUNTAIN REGION—*Grebes-Flycatchers:* Pied-billed Grebe: 13 Oct. (1) WaL (PR). Black Duck: 24 Aug. (1) WaL (PR). Ring-necked Duck: 1 Oct. (1) WiL. Lesser Scaup: 11 Aug. (2) WiL (present all summer). Bufflehead: 11 Aug. (2) WiL, 1 Oct. (2) WiL (present all summer). Cooper's Hawk: 10 Aug. (1) WaL (PR); throughout Oct. HC (MS). Red-tailed Hawk: 24-27 Oct. (1) HC (MS). Marsh Hawk: 29-31 Oct. (1) HC (MS). Yellow-billed Cuckoo: last 8 Oct. (1) EGC (LRH). Black-billed Cuckoo: last 5 Oct. (1). Great Horned Owl: throughout Sept., Oct. (1) MC (CRS). Eastern Kingbird: last 13 Aug. (1) EGC (LRH). Olive-sided Flycatcher: 6-11 Aug. (1) HC (MS).

Swallows-Warblers: Bank Swallow: 3 Aug. (3) MC (CRS). Cliff Swallow: 3 Aug. (6) MC (CRS). Purple Martin: last 8 Aug. (4) EGC (LRH). House Wren: last 21 Sep. (1) EGC (LRH). Catbird: last 23 Oct. (1) HC (MS). Tennessee Warbler: first 9 Aug. (1) HC (MS), very early record; 21 Sept. (1). Yellow Warbler: 13 Sept. (1) MC (PR, CRS), banded. Magnolia Warbler: 13 Sept. (1) MC (CRS), 23 Sept. (1) EGC (LRH). Cape May Warbler: 7 Sept. (1) RM (CRS). Blackburnian Warbler: 2 Aug. (1) UM (PR, CRS). Yellow-throated Warbler: 11 Aug.-18 Sept. (1) EGC (LH, LRH). Prairie Warbler: 17 Sept.-1(Oct. (1) EGC (LH, LRH). Yellow-breasted Chat: last 13 Sept. (1) MC (CRS), rather late. Wilson's Warbler: 14 Sept. (2) MC (PR, CRS). American Redstart: 21 Sept. (2) MC (CRS).

Orioles-Sparrows: Orchard Oriole: last 8 Aug. (2) EGC (LRH). Baltimore Oriole: last 7 Sept. (1) EGC (LH, LRH). Rusty Blackbird: 27 Oct. (100+) HC (MS). Blue Grosbeak: last 10 Aug. (1) WiL (CRS). Purple Finch: 26 Oct. (3) RM (FWB). Red Crossbill: 11 Oct. (3) RM (CRS). Savannah Sparrow: 29 Oct. (1) EGC (LRH). Chipping Sparrow: last 24 Oct. (1) EGC (LRH). Tree Sparrow: 28 Oct. (8) HC (MS). Lincoln's Sparrow: 5 Oct. (1) (AU, LH).

Locations: EGC—Elizabethton Golf Course, HC—Heaton Creek (near Roan Mountain), MC—Milligan College, RM—Roan Mountain, UM—Unaka Mountain, WaL—Watauga Lake, WiL—Wilbur Lake.

Observers: FWB—Fred W. Behrend, LH—Lois Herndon, LRH—Lee R. Herndon, PR—Pete Range, CRS—Charles R. Smith, MS—Maxie Swindell, AU—Alice Ulrich.

CHARLES R. SMITH, Route 2, Johnson City 37601.

PRESIDENT'S MESSAGE FOR TOS

There are several matters of interest to the TOS which have come to my attention since the time of our annual meeting last spring in Johnson City. First of all by mutual agreement it was decided not to attempt a joint meeting with the Kentucky Ornithological Society this spring. This does not mean that the members of our Society or theirs are not looking forward to such a meeting in the future, but it was felt that the best opportunity for such a joint meeting would occur in the spring of 1971 when the responsibility for our spring meeting would rest with Middle Tennessee, particularly the Nashville Chapter. If this joint meeting does materialize, it is planned that such a meeting would be located in South Central Kentucky, perhaps at Mammoth Cave, or in North Central Tennessee where it would be most convenient geographically to the membership of both societies.

The Ornithological Seminar last fall at Chalet Motel in Cleveland, Tennessee was very successful and well-attended. During the evening there was a lively discussion of the need for development and preservation of a quality environment for birds, beasts, and man. This discussion has now become even more timely because of national emphasis on pollution control as emphasized by President Nixon recently. I believe we all agreed that the members of the Tennessee Ornithological Society should play an active part in this movement, but the official role of our Society is as yet being considered by the officers and members. If you have ideas along this line I would be glad to hear from you. Under the sponsorship of the Tennessee Conservation League an attempt is now being made to form a "Tennessee Environmental Council" which would coordinate the activities of a number of societies such as ours who are interested in preserving a quality environment.

A number of ideas are under discussion by our committee for self-study and future planning. This committee will meet again before the annual spring meeting or on the Friday night of that meeting to discuss these ideas and present recommendations to the board of directors at that time. I think it is our feeling that it would be very desirable for the board of directors to meet in the fall perhaps at the same time as the Ornithological Seminar sponsored by the interested group in East Tennessee. This would allow those of us, who normally would have to attend a long session on Saturday afternoon during the annual spring meeting, to spend more time in birding and fellowship with the members during the spring meeting and would allow somewhat more time for transaction of vital business which cannot always wait a year for proper action by the board. As a by-product of this change, members of the board of directors would have an opportunity to attend some of the worth-while papers given during the seminar and all members would be encouraged to join in the activities of a fall meeting if their time and other commitments would allow.

The Memphis Chapter is currently developing plans for our annual spring meeting in West Tennessee and these may be well known to you by the time of this publication. I look forward to seeing as many of you as possible at that meeting.

—George R. Mayfield, Jr.

BOOK REVIEW

WILDLIFE IN DANGER. By James Fisher, Noel Simon and Jack Vincent. The Viking Press, Inc., Dept. JLW, 625 Madison Avenue, New York, N. Y. 10022, 1969: 7½ x 10 in. 368 pp., $12.95.

This book relates the present status of more than 200 species of mammals and birds which are considered endangered and doomed to extinction unless immediate steps are taken to insure their preservation. These and many other animal and plant species are described in detail, with more than 100 of the rarest shown in color and many more in black and white. About 150 of the illustrations are by leading wildlife artists commissioned specifically for this book and will be reproduced nowhere else.

In less than 300 years at least thirty-six species of mammals and ninety-four species of birds have become extinct and now more than 200 other species are or have been on the endangered list. Some species have vanished through natural causes, such as fires, floods or disease while more have been due to the activities of man. Some of these causes have been over-hunting, poisoning for predator control, and now pollution is taking its toll, as well as habitat destruction, usually by humans, such as, clearing our forests, draining swamps and wetlands, flooding our river basins, building for industry and urban development, and construction of jet ports.

In 1966 a world list of rare and endangered birds consisted of 318 species and subspecies. Once a bird is placed on this list it is seldom possible to improve its status so that survival is assured without expensive protective measures, such as continuous warden service or the setting aside of extensive and expensive land areas as sanctuaries or refuges which must be maintained under constant surveillance.

In almost every instance man, by one means or another, has been responsible for the decline of the endangered species. In some instances federal and state governments have placed bounties on some species, which were considered detrimental to certain interest groups. The rewards were so attractive that individuals became professionals until the species became so depleted that the operation was no longer profitable. The clearing, cultivating, draining, flooding, filling, developing, polluting and otherwise encroaching upon specific types of habitat has made it impossible for certain species to find adequate food for survival. Hunting pressure on some of our game birds and waterfowl makes it necessary to limit the hunting season and the bag limit to maintain a population sufficient to insure survival of some species to assure that they do not become eligible for the endangered list.

Some of the species of birds with which we are most familiar and toward which efforts are being made to save them from extinction are:

California Condor, Everglade Kite, Bald Eagle, Peregrine Falcon, Whooping Crane, Brown Pelican, Eskimo Curlew, Ivory-billed Woodpecker, Bachman's Warbler, Kirtland's Warbler, Dusky Seaside Sparrow, and Cape Sable Sparrow. The habitats suitable for survival of some of these species are very limited and restrictive, outside of which the species cannot survive. Man has the means of usurping these areas and using them to advance his interests as the human population continues to grow at a rapid rate. Not only are these areas made uninhabitable by changing types of habitat, but some areas are becoming so polluted and saturated with insecticides that they are unsuitable for man or breast.

We are reminded almost daily, through our news media, of our deteriorating environment and that if steps are not taken immediately, our lives will be in jeopardy along with countless individuals of many other forms of life. Current literature is replete with references to the declining numbers of many of our more common bird species. The so-called "red book" published annually by the U. S. Interior Department lists fourteen mammals and forty-six bird species in danger of extinction; Wallace (*The Jack-Pine Warbler,* 47: 70-75, 1969, published by the Michigan Audubon Society) lists more than thirty bird species which show declining numbers in recent years.

Our members are urged to join and support their local and national conservation societies and by purchasing this book you will be supporting conservation on an international scale.

Lee R. Herndon, Route 6, Elizabethton 37643.

"600 CLUB"

As the name implies, the "600 Club" is composed of individuals who have seen, heard or otherwise been able to identify 600 or more species of North American birds, north of the Mexican border. The number of persons who have done this is comparatively small.

Listed in *National Wildlife* (Peterson: February-March, 30, 1967) are a few of the individuals, who had the greatest number of birds on their "Life Lists" at that time. Leading the list was Dr. Ira Gabrielson with 670, Mr. and Mrs. Dudley Ross with 659 each, followed by Dr. Roger Tory Peterson with 650.

A survey conducted by Stuart Keith three years earlier, indicated that "no less than 19 people were then eligible for the '600' Club".

A Lifetime with the Birds (Greene: 344-372, 1966) published by Edwards Brothers, Inc., Ann Arbor, Michigan, lists the species common name, scientific name and the states or provinces in which he observed the particular species of the more than 600 species on his "life list". Mr. Greene is now attempting to "round up" all individuals who are eligible, or approaching eligibility for membership in this, as he expresses it, "fast growing organization".

The next Official Summary will be out about 15 April 1970. If you qualify for membership or are very near the 600 mark, please write: Mr. Earle R. Greene, 1600 W. 5th. St., Oxnard, California 93030, giving him the number of birds on your list by 1 April 1970.

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders· Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, specific, and descriptive.

STYLE: Recent issues of THE MIGRANT should be used as a guide in the preparation of manuscripts· Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N. W., Washington, D. C. 20016.

COPY: Manuscripts should be typed double spaced on 8½ x 11" paper with adequate margins, for editorial notations, and should contain only entries intended for setting in type, except the serial page number. Tabular data should be entered on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper in black and white (not in color). Instructions to the editors should be given on a separate sheet. Weights and measurements should be in metric units. Dating should be in "continental" form (e.g., 7 March 1968).

NOMENCLATURE: Common names should be capitalized followed by binomial scientific name in italics only after the first occurrence in the text for both regular articles and ROUND TABLE NOTES, and should conform to the A.O.U. Check-list 5th edition, 1957. Trinomial should be used only after the specimen has been measured or compared with typical specimens.

BIBLIOGRAPHY: When there are more than five references in an article, they should be placed at the end of the article, otherwise they should be appropriately included in the text.

SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted·

REPRINTS: Reprints are available on request· Reprint requests should accompany article at the time of submission. Billing to authors will be through the state T.O.S. Treasurer.

Books for review and articles for publication should be submitted to the editor. Seasonal reports and items should be forwarded to the appropriate departmental editor whose name and address will be found on the inside front cover.

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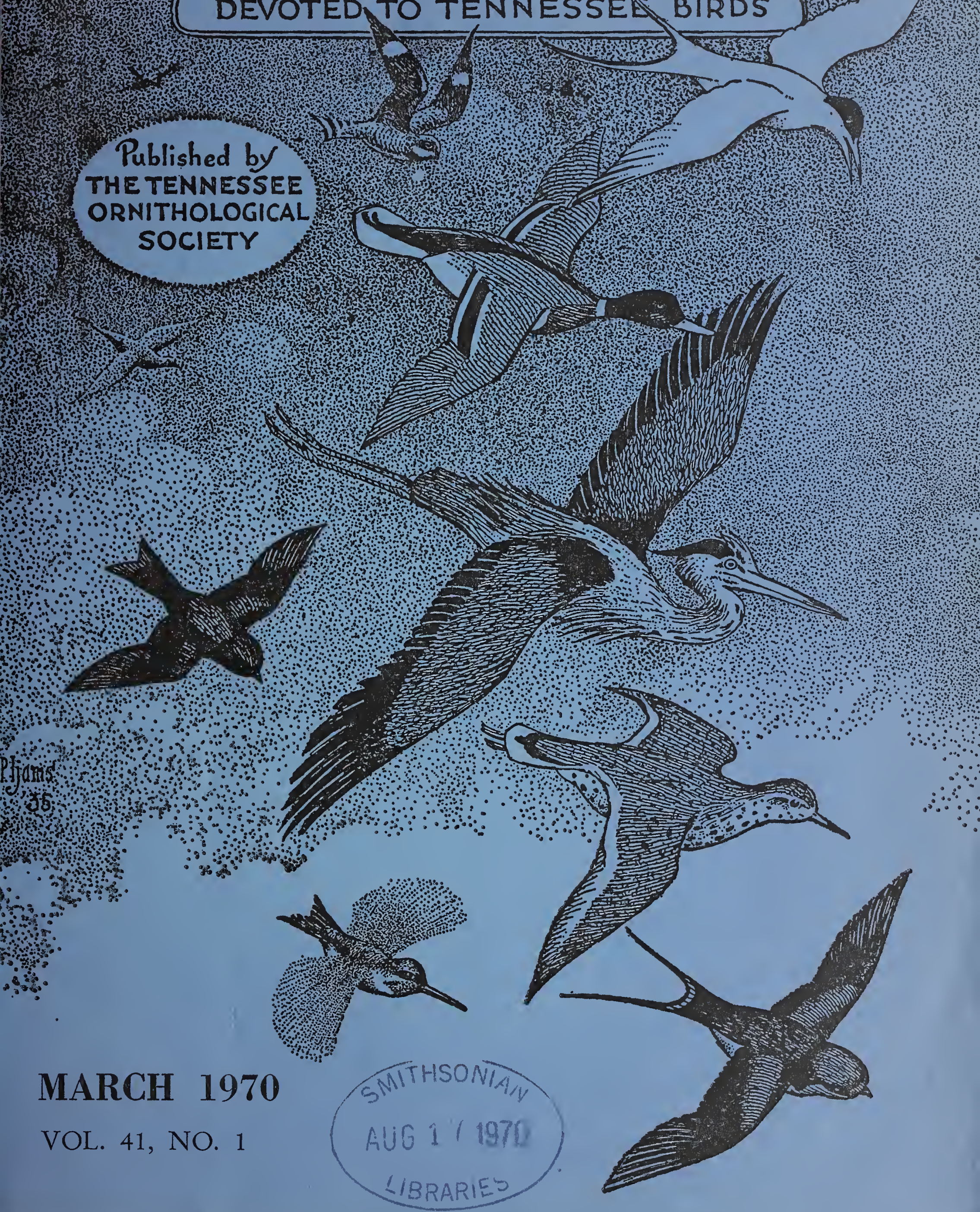
THE MIGRANT

A QUARTERLY JOURNAL
DEVOTED TO TENNESSEE BIRDS



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ADDENDUM: THE BIRDS OF KNOX COUNTY, TENNESSEE

By Fred J. Alsop, III and Gary O .Wallace

In the twelve years since the publication of "The Birds of Knox County", by Joseph C. Howell and Muriel B. Munroe, 22 additional species have been recorded in Knox County. "The Birds of Knox County, Tennessee" (Howell and Monroe, 1957) listed 231 species as reliably reported within the boundaries of that county. In the condensed version of that work (Howell and Monroe, 1958) three additional species were added, bringing the total to 234.

This paper is intended as a supplement. Herein we have strived for consistency with the original work. Listed are the species for which there are available reliable records for Knox County from June, 1956 to October, 1969. Sources of information utilized were issues of *The Migrant* and the personal records of members of the Knoxville Chapter of the Tennessee Ornithological Society.

The 22 species treated in this paper are arranged in the order in which they appear in the *Check-list of North American Birds* (1957) prepared by the American Ornithologists' Union.

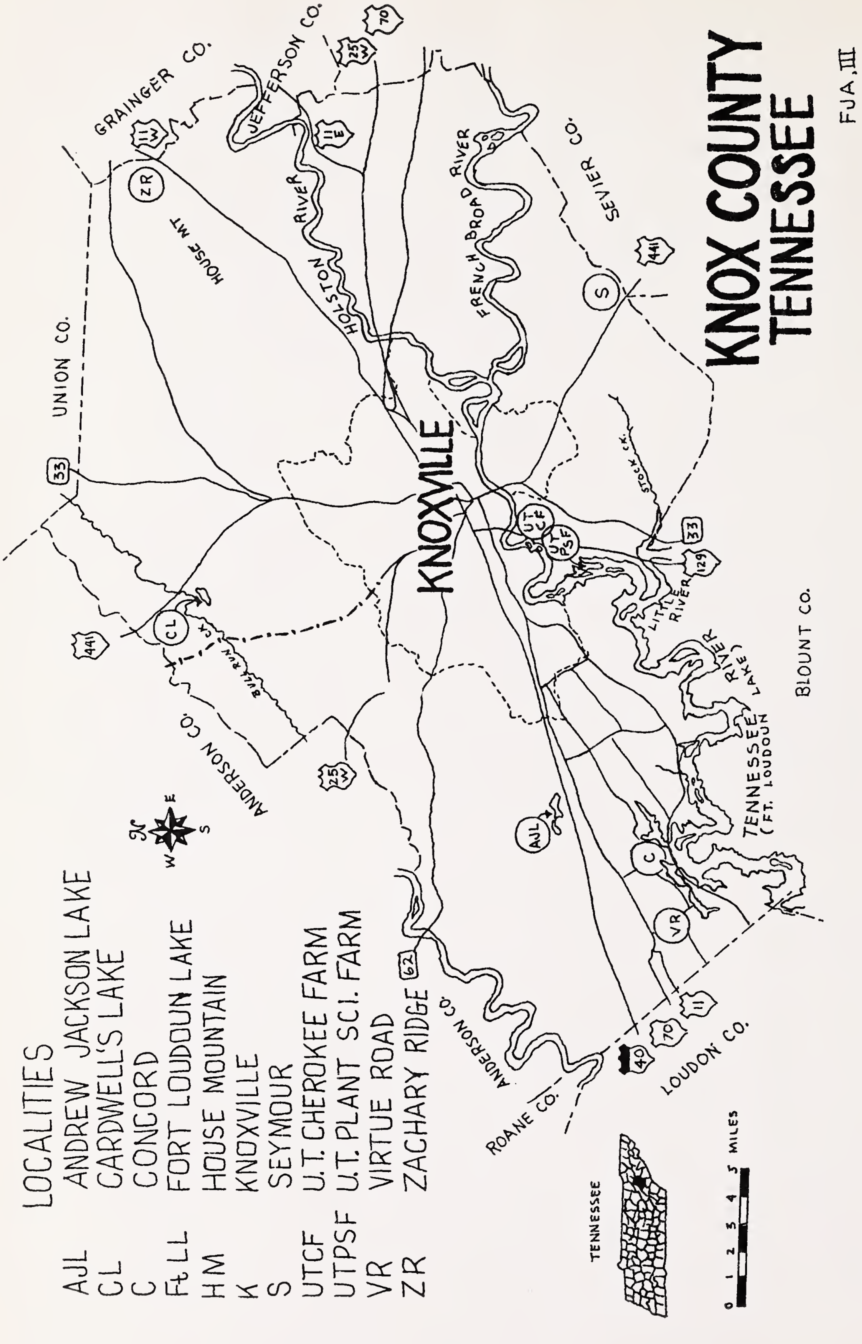
The information on each record is given in the following order: date, number of individuals, location (referring to the nearest named landmark; see map, Fig. 1), and the observer.

RED-THROATED LOON (*Gavia stellata*).—Known from two records: 6 Nov. 1959 (1) Ft. LL (JBO, RBH, *Migrant* 31:15); 30 Apr. 1967 (1) Ft. LL (TK, *Migrant* 38:36).

CATTLE EGRET (*Bubulcus ibis*)—One record: 5 May 1968 (11) UTCF (DM, GM, BM, JMC, JTT, TOS, *Migrant* 39:65) photographed FJA.

WHISTLING SWAN (*Olor columbianus*)—One record: 9 Dec. 1967 (4) Ft. LL (CM, TOS, *Migrant* 39:13).

COMMON SCOTER (*Oidemia nigra*)—One record: 14 May-14 June 1967 (1) male, CL (JMC, RME, ETS, TOS, *Migrant* 38:67).


KNOX COUNTY
TENNESSEE
FJA,III
LOCALITIES
AJL ANDREW JACKSON LAKE
CL CARDWELL'S LAKE
C CONCORD
Ft.LL FORT LOUDOUN LAKE
HM HOUSE MOUNTAIN
K KNOXVILLE
S SEYMOUR
UTCF U.T. CHEROKEE FARM
UTPSF U.T. PLANT SCI. FARM
VR VIRTUE ROAD
ZR ZACHARY RIDGE
KNOXVILLE
GRAINGER CO.
JEFFERSON CO.
UNION CO.
SEVIER CO.
BLOUNT CO.
ANDERSON CO.
ANDERSON CO.
ROANE CO.
LOUDON CO.
HOLSTON RIVER
FRENCH BROAD RIVER
HOUSE MT.
BULL RUN CK.
STOCK CK.
LITTLE RIVER
TENNESSEE RIVER
(FT. LOUDOUN LAKE)
ZR
CL
AJL
C
VR
S
UT CF
UT PSF
11 W
11 E
25 W
70
33
441
129
62
11
40
N
E
W
S
TENNESSEE
0 1 2 3 4 5 MILES

ROUGH-LEGGED HAWK (*Buteo lagopus*)—One record: 20 Jan. 1968 (1) light phase, VR (JCH, FJA, JMC, RME, *Migrant* 39:16) and 21 Jan. 1968 (TOS).

GOLDEN EAGLE (*Aquila chrysaetos*)—One record: 29 Oct. 1961 (1) HM (JO, BG, *Migrant* 33:20).

PURPLE GALLINULE (*Porphyrula martinica*)—Known from three records: 12 Oct. 1958 (1) K (ME, *Migrant* 30:9); 15 Apr.-5 May 1962 (1) K (GHB and JBO, *Migrant* 33:34); 1-8 May 1962 (1) C (JBO, *Migrant* 33:34).

AMERICAN GOLDEN PLOVER (*Pluvialis dominica*)—Known from two records: 15 Oct. 1966 (1) UTPSF (FJA and JMC), 16 Oct. (JTT), present through 26 Nov. 1966 (FJA and TOS, *Migrant* 38:1-3); 23 Mar. 1968 (125) and 24 Mar. 1968 (30) UTPSF (PP, IW, BW, TOS, *Migrant* 39:45).

WILLET (*Catoptrophorus semipalmatus*)—Known from three records: 7 Sept. 1963 (1) Sterchi's Bait Farm on Dry Gap Pike and Jim Sterchi Road (MS); 17 April 1967 (1) pond near jct. Cedar Bluff Rd. and I-40 (PP); 14 May 1967 (1) UTPSF (FJA and JCH).

WHITE-RUMPED SANDPIPER (*Erolia fuscicollis*)—One record: 17 Oct. 1958 (1) AJL (RBH, *Migrant* 30:9).

LONG-BILLED DOWITCHER (*Limnodromus scolopaceus*)—Known from two records: 2 Oct.-8 Oct. 1966 (1) UTPSF (JMC, FJA, WFS, TOS, *Migrant* 38:1-3), photographed (FJA); 14 May 1967 (20) P (JMC, RME, and ETS).

BUFF-BREASTED SANDPIPER (*Tryngites subruficollis*)—One record: 12 Sept.-22 Sept. 1969 (3-6) UTPSF (JB, GB) also (WFS, FJA, JTT, JMC, JBO, TOS) photographed (FJA).

RED-COCKADED WOODPECKER (*Dendrocopos borealis*)—One record: 1 Jan. 1968 (1) S (BC, *Migrant* 39:22).

TRAILL'S FLYCATCHER (*Empidonax traillii*)—10 May 1959 (1) UTCF (KD, RBH, *Migrant* 31:39); 16 May 1959 (1) UTCF (DH, PP, JE, *Migrant* 31:39); night of 20-21 Sept. 1963 (1) tower kill, WBIR-TV, Zachary Ridge (Mr. and Mrs. JCH); 16 May 1969 (1) UTCF (FJA)

VERMILION FLYCATCHER (*Pyrocephalus rubinus*)—One record: 21-22 Oct. 1964, one male in first winter plumage with a second bird which could have been a female, K (JBO, TW, *Migrant* 36:14-15).

SWAINSON'S WARBLER (*Limnothylypsis swainsonii*)—Known from four records, all killed at WBIR-TV tower, Zachary Ridge: night of 20-21 Sept. 1963 (3) (Mr. and Mrs. JCH); night of 12-13 Sept. 1964 (1) (JCH and JMC); night of 2-3 Oct 1964 (2) (JCH, JMC, RME); night of 4-5 Oct 1964 (1) (JCH, JMC, RME).

WESTERN MEADOWLARK (*Sturnella neglecta*)—One record: 19 April 1959 (1) C (DK, RBH) present through 23 May 1959 (RBH, *Migrant* 30: 24, 30-31), also observed by (JCH, PP, BK, AK, CF, RB).

COMMON REDPOLL (*Acanthis flammea*)—29 Dec. 1968 (1) Karns (TM); one bird seen at the same location 10 Jan. 1969 (JBO).

WHITE-WINGED CROSSBILL (*Loxia leucoptera*)—31 Jan. 1964, one female and one male, 15 Hedgewood Dr., K (NC); 1 Feb. 1964, two females and one male, Lynnhurst Cemetery, K (NC, JMC); the crossbills remained in the cemetery through 22 March 1964, numbers observed varied from 1-20 (av. 7), (JMC, *Migrant* 35: 25-30).

HENSLOW'S SPARROW (*Passerherbulus henslowii*)—Known only from one record: night of 28-29 Sept. 1963 (1) a bird killed during a night migration when it struck WBIR (Channel 10) TV Tower, Zachary Ridge (JCH).

OREGON JUNCO (*Junco oreganus*)—21 Jan. 1963 (1) 15 Hedgewood Dr., K (NC) also observed by (JMC, MCF); 27 Jan. 1963 (1) K (ME, *Migrant* 34:16); all of Jan. 1965 (2) K (PP); 17 Jan. 1965 (1) K (JMC); and 3 Feb. 1965 (1) K (ME, *Migrant* 36:10).

TREE SPARROW (*Spizella arborea*)—17-26 March 1960 (1) K (BL, JTT, *Migrant* 31:15); 2-3 Feb. 1965 (1) K (MS, *Migrant* 36:10); 25 Jan. 1968 (10) HM (PP, *Migrant* 39:22); 10 Feb. 1968 (4) UTPSF (CM), the 4 Tree Sparrows were present through 9 March 1968 (FJA).

Observers: FJA—Fred J. Alsop, III, GHB—G. H. Baker, GB—Gilbert Banner, J. B.—Joshua Banner, RB—Ralph Bullard, JMC—James M. Campbell, NC—Nancy Campbell, BC—Brockway Crouch, KD—Kenneth Dubke, RME—Ray M. (Danny) Ellis, JE—John Elson, ME—Mary Enloe, MCF—Mr. and Mrs. Merritt C. Farrar, CF—Mr. and Mrs. Carl Frister, BG—Bill Gallagher, RBH—Robert B. Hamilton, DH—David Highbaugh, JCH—Joseph C. Howell, AK—Audrey Kaiman, BK—Berney Kaiman, TK—Tony Koella, BL—Beth Lacey, BM—Beulah McGhee, DM—Dennis McGhee, GM—George McGhee, TM—Terry McGown, CM—Chris McMillan, JO—John Ogden, JBO—J. B. Owen, PP—Paul Pardue, WFS—William F. Searl, III, ETS—Ed. T. Smith, MS—Maxie Swindell, JTT—James T. Tanner, TOS—Tennessee Ornithological Society (Knoxville Chapter), TW—Mr. and Mrs. Tom Walton, BW—Bill Williams, IW—Irene Williams.

SUMMARY

This list adds 22 species of birds to those already listed for Knox County. The total number of species recorded from within the boundaries of that county now stands at 256.

ACKNOWLEDGMENTS

We wish to thank Dr. J. C. Howell for his suggestions and critical reading of this manuscript.

LITERATURE CITED

American Ornithologists' Union. 1957. Check-List of North American Birds. 5th ed. Amer. Ornith. Union, Baltimore, Md.

Howell, J. C. and Muriel B. Monroe. 1957. The birds of Knox County, Tennessee. *J. Tenn. Acad. Sci.* 32 (4): 247-322.

________ 1958. The birds of Knox County, Tennessee. *The Migrant*, 29 (2): 17-27.

Department of Zoology and Entomology, The University of Tennessee, Knoxville 37916.

THE 1969 CHRISTMAS SEASON BIRD COUNT

The fortieth annual Christmas Season Bird Count listed a total of 126 species. This represents the second highest species count ever recorded for the Christmas Count and is exceeded by the previous high count of 130 species recorded in 1965. The number of individual counts also continues to increase, with seventeen counts being submitted this year.

Perhaps the highlight of this year's counts was the unusual sightings reported from various locations, among them being: Rough-legged Hawk and Lesser Yellowlegs at Memphis; Virginia Rail, LeConte's Sparrow, Tree Sparrow, and Lapland Longspur at Reelfoot Lake; Least Sandpiper and Brewer's Blackbird at Columbia; Oldsquaw, Goshawk, and Tree Sparrow at Nashville; Least Sandpiper, Bonaparte's Gull, and Snow Bunting at Hickory-Priest; White-winged Scoter at Chattanooga; Least Sandpiper and Dunlin at Hiwassee; Semipalmated Plover, Lesser Yellowlegs, and Summer Tanager at Knoxville; White-winged Crossbill at Great Smoky Mountains National Park; and Swainson's Thrush at Elizabethton.

With an increase in both the numbers of counts taken and the number of individual participants in the field, compilers are urged to renew their efforts at attaining undisputable accuracy in reporting counts for publication.

INFORMATION ON THE COUNT

MEMPHIS—35° 09' N, 89° 56' W (All points within a 15-mile diameter circle, center Highland Heights; roughly 1953 areas; wooded bottomlands 22%, deciduous woods, city parks and cemeteries 30%, pastures, bare fields 15%, suburban roadsides 30%, river edge 3%). 21 December; 07:00 to 16:30, rain, sleet, snow; temp. 39°to 34° wind NW, 10-17 m.p.h. Twenty-three observers in eight parties. Total party-hours 69 (48 on foot, 21 by car); total party-miles 157 (47 on foot, 110 by car).

Rough-legged Hawk (BC, ER, 5 minutes, close), Lesser Yellowlegs (LJ, BG, close), Vesper Sparrow (HV, 2nd Memphis count). Seen in count period but not on count day: Dickcissel (GH), Pine Siskin (WLW), Oregon Junco (Helen D.)

Mr. and Mrs. Ben B. Coffey, Jr. (compilers), Dr. Julian Darlington, Mary Davant, Mr. and Mrs. Henry Dinkelspiel, Jack Embury, Earl J. Fuller, Billy C. Grimm, George Hervey, Robert Holt, Lee R. Johnson, Edward M. King, Nelle Moore, John Morrow, George Payne, Jr., Ella Ragland, Ernest Restivo, Dr. and Mrs. Arlo I. Smith, Dr. Howard Vogel, Dr. Wendell L. Whittemore, Bobby Whittemore.

REELFOOT LAKE—36° 25' N, 89° 23' W (All points within a 15-mile diameter circle, center in Reelfoot Lake on west side of Starve Pond, extending northward to north end of Lake 9 in Ky., eastward to bridge on South Reelfoot Creek near Protemus and to Hornbeak, southward to north end of Lake Isom Refuge, westward to Miss. River; deciduous woods 30%, fields and pastures, 50%, lakes and swamps 20%). 26 December; 07:00 to 16:00, clear; temp. 33° to 46°; wind SW, 0-5 m.p.h. Eight observers in four parties. Total party-hours 35 (16 on foot, 15 by car, 4 by boat); total party-miles 186 (16 on foot, 152 by car, 18 by boat).

Virginia Rail (JD). Seen in area during count period but not on count day: Turkey Vulture.

Ben Coffey, Lula Coffey, John DeLime, Janice Leggett, Kenneth Leggett (compiler), Clell Peterson, Arlo Smith, Noreen Smith.

HENDERSON—All points within a 15-mile diameter circle, east extremity, city of Henderson running west to east shore of Lake LaJoie in Chickasaw Park. Center just east of main entrance to park. Area includes Highway 100, Chickasaw Park, Hughes Road south to Montezuma, lower Montezuma Road, Old Jacks Creek Road to Talley Store, surrounding farm roads and barnyards. 31 December; 06:00 to 17:15, temp. 33°; wind 1-5 m.p.h., completely overcast after three days and nights of constant rain. One observer. Total party-hours 11 ¼ (4 on foot, 7¼ by car); total party-miles 65 (4 on foot, 61 by car).

Seen in area during count period but not on count day: Common Crow, Cedar Waxwing.

Mrs. Eddie M. Carpenter (compiler).

SAVANNAH—All points within a 15-mile diameter circle, center six miles SE of Savannah courthouse. 31 December; 07:00 to 17:00. Temp. 30° to 36°; wind 0-10 m.p.h., cloudy and dark. Four observers in two parties. Total party-hours 18; total party-miles 110.

Both Bald Eagles were adults, with white heads, necks, and tails.

David (compiler), Mike, Paul, and Roger Patterson.

COLUMBIA—35° 36' N, 87° 10' W (All points within a 15-mile diameter circle, center, 1 mile west of Zion Presbyterian Church to include Columbia, Mt. Pleasant, Arrow Lake, Hampshire, Williamsport, Duck River; deciduous woods 20%, fields and pastures 50%, swamps, lakes, and river banks 15%, farm yards 5%, towns 10%). 27 December; 07:00 to 17:30; partly cloudy; temperature 22° to 36°; wind NE 0-8 m.p.h.; patches of snow on ground. Eight observers in four parties. Total party-hours 19½ (6 by car, 10 on foot, 3 by canoe, ½ by plane); total party-miles 259 (180 by car, 10 on foot, 9 by canoe, 60 by plane).

Large blackbird and Robin roost was present in area. Seen in area during count period but not on count day: American Woodcock, Winter Wren, Golden-crowned Kinglet.

William Dale, William Fuqua, Mary Lucy Fuqua, Daniel Gray, Jr., Gaither Gray, Cleo Mayfield, George Mayfield, Jr. (compiler), and Evelyn Ridley.

NASHVILLE—All points within a 15-mile diameter circle, center on the Harpeth River bridge on Tennessee Highway 100. Radnor Lake was included. Deciduous wooded hills, 40%; fields and pastures, 25%; river bottom fields, 20%; roadsides and suburban yards, 15%. 27 December; 06:30 to 17:00 plus one party from midnight to 01:30 on an unsuccessful hunt for owls. Temp.

THE 1969 CHRISTMAS SEASON BIRD COUNTS

	Memphis	Reelfoot	Henderson	Savannah	Columbia	Nashville	Hickory P.	Lebanon	Chattanooga	Hiwassee	Norris	Knoxville	GSMNP	Greeneville	Elizabethton	Kingsport	Bristol
Common Loon	--	--	--	7	--	--	--	--	1	--	--	--	--	--	--	1	--
Horned Grebe	--	--	--	7	--	--	11	--	10	--	--	--	--	--	1	6	3
Pied-billed Grebe	2	4	--	16	1	4	34	--	5	1	--	--	--	--	4	6	5
Great Blue Heron	--	5	--	--	8	--	6	--	1	44	6	2	--	1	--	5	9
Canada Goose	--	12500	--	35	--	11	1	30	5	4100	--	--	--	6	1	--	--
Snow Goose	--	1	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Blue Goose	--	2	--	--	--	--	1	--	--	1	--	--	1	--	--	--	--
Mallard	31	55000	1	--	392	29	84	200	47	1100	--	21	--	--	8	155	51
Black Duck	--	550	--	--	231	1	29	--	60	1202	--	16	--	--	--	400	21
Gadwall	--	3300	--	--	8	3	4	--	15	27	--	140	--	--	--	1	--
Pintail	--	175	--	--	--	--	--	--	--	5	--	--	--	--	--	2	--
Gr.-winged Teal	--	--	--	--	10	--	--	--	4	35	--	--	--	--	--	--	--
Amer. Widgeon	--	1200	--	--	14	48	--	--	--	41	--	1	--	--	--	3	--
Shoveler	--	250	--	--	2	--	--	--	--	--	--	--	--	--	1	--	--
Wood Duck	--	650	--	2	6	--	--	--	--	--	--	--	--	--	--	--	--
Redhead	--	20	--	--	2	4	--	--	--	--	--	--	--	--	2	--	--
R.-necked Duck	--	4800	--	--	86	87	--	--	2	--	--	5	--	--	89	68	--
Canvasback	--	101	--	--	--	19	13	--	--	--	--	--	--	--	--	--	1
Greater Scaup	--	--	--	--	--	--	--	--	123	--	--	--	--	--	--	--	--
Lesser Scaup	--	350	--	--	4	64	16	--	--	1	--	--	--	--	8	100	26
Common Goldeneye	--	20	--	20	3	27	13	--	13	--	--	--	--	--	--	4	--
Wh.-winged Scoter	--	--	--	--	--	--	--	--	6	--	--	--	--	--	--	--	--
Bufflehead	--	4	--	14	--	7	11	--	--	18	--	--	--	--	28	9	--
Oldsquaw	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
Ruddy Duck	--	225	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--
Hooded Merganser	--	30	--	--	2	--	20	--	1	25	--	--	--	--	--	1	3
Common Merganser	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1
Rd.-br. Merganser	--	--	--	--	--	--	--	--	1	3	--	--	--	--	--	--	--
Turkey Vulture	--	--	10	--	--	1	--	--	--	--	--	--	--	--	--	--	104
Black Vulture	--	3	12	--	82	4	--	--	--	3	--	--	--	2	--	--	17
Goshawk	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--
Sh.-shinned Hawk	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
Cooper's Hawk	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1	3
Red-tailed Hawk	10	23	1	2	9	18	--	2	6	2	1	4	2	--	--	1	--
Red-shld. Hawk	--	6	1	2	1	--	1	--	--	1	--	--	--	--	--	--	--
Rough-legged Hawk	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Golden Eagle	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bald Eagle	--	45	--	2	--	--	--	--	--	1	--	--	--	--	--	--	1
Marsh Hawk	3	14	--	3	4	3	--	2	2	2	--	--	1	--	--	--	--
Sparrow Hawk	7	12	4	--	7	25	10	1	4	1	--	4	5	3	5	1	5

	Memphis	Reelfoot	Henderson	Savannah	Columbia	Nashville	Hickory P.	Lebanon	Chattanooga	Hiwassee	Norris	Knoxville	GSMNP	Greeneville	Elizabethton	Kingsport	Bristol
Ruffed Grouse	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--
Bobwhite	44	4	--	56	52	100	--	17	6	45	--	38	5	44	1	14	12
Turkey	--	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Virginia Rail	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	--	2600	--	250	650	225	196	--	87	1	--	4	--	--	1	10	--
Semipalmated Plover	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--	--
Killdeer	52	23	1	3	8	45	22	--	15	31	6	79	15	15	13	2	25
Common Snipe	2	14	--	2	38	3	1	--	2	5	--	32	1	--	1	--	2
Lesser Yellowlegs	1	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
Least Sandpiper	--	--	--	--	8	--	1	--	--	1	--	--	--	--	--	--	--
Dunlin	--	--	--	--	--	--	--	--	--	56	--	--	--	--	--	--	--
Herring Gull	--	4	--	2	--	--	6	--	8	--	--	1	--	--	--	10	--
Ring-billed Gull	3	52	--	52	--	--	159	--	26	55	--	36	--	--	--	3	1
Bonaparte's Gull	--	--	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--
Mourning Dove	201	132	5	120	486	139	52	186	194	102	67	147	191	165	10	75	263
Barn Owl	--	--	--	--	--	--	--	2	1	--	--	--	--	--	1	--	--
Screech Owl	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--	1	1
Great Horned Owl	--	1	--	--	5	--	--	--	--	--	--	1	--	--	--	1	2
Barred Owl	--	2	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--
Belted Kingfisher	--	1	1	7	9	13	9	1	2	5	4	8	8	3	3	5	4
Yl.-shafted Flicker	106	71	10	31	17	56	11	10	15	5	12	24	2	3	5	8	1
Pileated Woodpecker	6	11	2	6	15	33	1	--	2	2	7	7	9	2	5	5	4
Rd.-bellied Woodpecker	61	72	7	23	31	85	8	7	10	2	11	21	2	10	1	3	6
Rd.-headed Woodpecker	4	9	2	--	--	7	1	1	6	1	--	2	--	--	--	2	1
Yl.-bellied Sapsucker	23	13	3	6	9	32	5	4	4	5	10	18	12	3	1	6	--
Hairy Woodpecker	4	11	1	8	8	12	--	3	8	1	7	2	13	--	--	1	2
Downy Woodpecker	26	37	5	11	30	77	12	9	21	4	22	28	23	15	12	12	20
Eastern Phoebe	--	2	--	--	1	2	--	--	--	--	3	--	16	--	1	--	2
Horned Lark	16	886	--	3	29	2	41	--	22	--	--	18	20	25	2	--	--
Blue Jay	348	156	26	140	9	160	31	59	51	20	35	219	68	64	37	40	63
Common Raven	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--
Common Crow	36	1100	--	43	77	418	64	37	34	170	214	536	194	60	101	318	457
Fish Crow	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bl.-cap. Chickadee	--	--	--	--	--	--	--	--	--	--	--	--	12	--	--	--	--
Carolina Chickadee	97	102	10	65	69	268	29	45	42	8	83	191	138	46	25	60	65
Tufted Titmouse	29	32	9	36	77	157	19	37	41	1	29	96	32	41	23	68	38
Wh.-br. Nuthatch	1	4	--	5	1	10	2	--	10	--	5	3	3	4	5	8	6
Rd.-br. Nuthatch	3	--	5	1	--	3	1	--	13	3	3	21	24	3	4	6	5
Brown Creeper	1	4	--	3	1	4	--	--	4	--	1	12	3	1	--	3	1
Winter Wren	6	13	--	1	--	4	--	--	2	2	2	2	5	--	1	1	1
Bewick's Wren	--	2	--	2	--	2	3	6	--	--	--	--	--	2	--	--	--
Carolina Wren	59	60	3	20	21	45	9	1	21	5	20	92	25	10	14	10	15
Mockingbird	147	22	9	8	53	195	47	52	41	6	66	148	42	25	18	14	51
Brown Thrasher	23	2	1	3	3	4	3	--	1	--	3	2	--	1	--	1	--
Robin	1705	53	3	654	153100	3100	26	513	25	510	43	27	98	2	6	54	3

	Memphis	Reelfoot	Henderson	Savanah	Columbia	Nashville	Hickory P.	Lebanon	Chattanooga	Hiwassee	Norris	Knoxville	GSMNP	Greeneville	Elizabethton	Kingsport	Bristol
Hermit Thrush	15	15	--	6	2	7	--	--	1	--	--	3	11	--	--	--	--
Swainson's Thrush	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
Eastern Bluebird	3	16	1	8	4	136	14	3	8	6	48	1	1	3	10	1	10
Gol.-cr. Kinglet	11	27	4	5	--	7	4	1	5	2	1	12	19	2	7	5	12
Ruby-cr. Kinglet	12	31	1	1	4	12	--	--	--	2	9	4	8	--	--	2	3
Water Pipit	--	1	--	--	7	1	--	--	5	6	--	12	3	--	--	--	--
Cedar Waxwing	98	7	--	522	155	160	57	45	30	450	390	10	49	10	--	32	117
Log.-hd. Shrike	4	15	4	4	4	33	9	3	2	5	9	3	4	3	1	2	7
Starling	6804	4800	102	490	506300	8479	5567	1147	1112	52800	1530	2159	509	193	606	75	1316
Myrtle Warbler	73	18	--	1	4	108	2	--	5	38	147	39	9	7	7	12	--
Pine Warbler	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--
House Sparrow	727	360	23	50	240	56	106	174	62	16	14	135	79	115	69	60	88
Eastern Meadowlark	191	41	3	142	109	367	73	66	55	225	76	186	120	193	11	11	227
Rd.-wgd. Blackbird	2480	3750	97	10000	300426	535	--	--	275	3	--	17	8	--	--	--	--
Rusty Blackbird	20	7	250	--	200040	--	--	1	195	--	--	42	--	--	8	--	--
Brewer's Blackbird	--	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--	--
Common Grackle	2707	2400	150	1500	410600	659	15	164	80	--	1	3536	200	2032	22	20	1
Br.-hd. Cowbird	106	2800	--	1	100750	60	--	--	6	--	--	21	--	--	--	--	--
Summer Tanager	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
Cardinal	627	235	31	96	97	498	158	171	98	25	142	318	249	93	56	78	101
Evening Grosbeak	--	--	--	12	--	--	--	--	--	4	4	--	125	35	52	--	10
Purple Finch	81	1	22	77	3	167	28	167	84	65	106	74	57	34	3	21	7
Pine Siskin	--	--	178	135	--	52	--	--	103	36	36	619	740	13	43	--	4
Amer. Goldfinch	223	67	49	167	88	471	36	8	100	50	73	181	195	36	57	36	164
Red Crossbill	--	--	--	--	--	--	--	--	--	--	--	--	275	--	12	10	--
Wh.-winged Crossbill	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--
Ru.-sided Towhee	64	10	15	52	40	95	45	17	65	15	35	191	60	50	7	26	17
Savannah Sparrow	17	3	--	25	4	1	--	--	2	--	--	5	35	--	--	--	1
LeConte's Sparrow	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vesper Sparrow	2	--	--	--	--	--	--	--	2	4	--	--	--	--	--	--	--
Sl.-colored Junco	768	241	137	468	72	701	115	44	270	45	207	129	1060	27	130	138	84
Tree Sparrow	--	36	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--
Chipping Sparrow	--	--	--	--	--	2	--	--	1	--	--	--	--	--	1	--	--
Field Sparrow	86	105	1	48	105	234	120	8	85	118	109	291	131	46	37	24	37
Wh.-cr. Sparrow	15	--	39	--	30	75	177	36	3	--	--	2	--	103	5	4	10
Wh.-throated Sparrow	1042	223	78	132	104	218	23	12	175	26	173	547	358	49	38	92	32
Fox Sparrow	56	12	7	5	27	16	4	--	3	--	--	2	2	2	3	1	--
Swamp Sparrow	101	74	2	74	28	7	7	--	20	16	--	36	8	--	1	--	--
Song Sparrow	274	124	9	117	44	192	68	1	36	22	86	342	321	31	54	25	50
Lapland Longspur	--	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Snow Bunting	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--
Total Individuals	19667	90220	1340	15809	1674968	18921	7647	3332	3910	61641	3876	10916	5613	3635	1679	2183	3599
TOTAL SPECIES	60	91	48	65	74	77	63	40	77	69	44	68	58	49	60	68	61

23° to 38°; wind 0-5 mph from SW. Clear until noon, then some clouds. Thirty-eight observers in fourteen parties. Total party-hours 113 (78 by car, 35 on foot); total party-miles 313 (275 by car, 38 by foot).

Goshawk by Albert Ganier and party (Ben Grose, John and Martha Herbert). (*The Migrant* 40: 87). Oldsquaws by Erline Elmore on Radnor Lake. Confirmed later in the afternoon by both Harry Monk and Henry Parmer. Tree Sparrow was by Roger Harshaw. Two additional birds were found a few days later. The Chipping Sparrows were by Goodpasture, Mike Bierly, Harshaw, and Tarbel.

B. H. Abernathy, Francis Abernathy, Clyde and Vivian Anderson, Bob Ake, Buck Bell, Sue Bell, Mike Bierly, Mary Rose Bradford, Kenneth Bunting, Annella Creech, Milbrey Dugger, Erline Elmore, Charles Farrell, Clara Fentress, Albert F. Ganier, Katherine A. Goodpasture, Ben Grose, Roger Harshaw, John and Martha Herbert, Mrs. A. B. Herron, Louise Jackson, Carol Knauth, Margaret Mann, Harry C. Monk, Anne Nickols, Henry E. Parmer (Compiler), Mr. and Mrs. Oscar Patrick, Mr. and Mrs. Bob Sharp, Mrs. Walter Sharp, Anne Tarbell, Laurence O. Trabue, Joey Vaudrey, Mr. and Mrs. George Woodring.

HICKORY-PRIEST (Formerly Old Hickory Lake)—All points within a 15-mile diameter circle, center mouth Stones River at the Cumberland, northward to dam and lower 8 miles of Old Hickory Reservoir, southward to lower 4 miles J. Percy Priest Lake, westward to Bush Lake, eastward to 1 mile west of Mount Juliet; fields and pastures 40%, town and suburbs 30%, deciduous woods 20%, lakes and rivers 10%. 21 December: 07:00 to 16:45; temp. 38° to 42°; wind S 6-12 m.p.h.; overcast, rain all day. Seven observers in three parties plus three at feeders*. Total party-hours 19 (8 on foot, 11 by car); total party-miles 159 (6 on foot, 153 by car).

The Blue Goose (Riggins-Tarbell) was an immature and had been present for a month. The Least Sandpiper (Riggins-Tarbell) had been present occasionally all winter. The Brown Thrashers were at feeders. Five thousand of the 5567 Starlings reported were seen in the town roost. Of the 177 White-crowned Sparrows seen, 173 were in one flock at the back of Bush Lake. The Snow Buntings (Monk-Parmer) were first sighted on 29 November and have been photographed. They have been seen by over twenty observers on fifteen different days. Seen in area count period, but not on count day: Red-tailed Hawk, Marsh Hawk, Ruby-crowned Kinglet.

Michael Bierly (compiler), Marie Drumright*, Roger Harshaw, Carol Knauth*, Margaret Mann*, Harry Monk, Henry Parmer, Heather Riggins, John Riggins, Ann Tarbell.

LEBANON—All points within a 15-mile diameter circle center Wilson County. 26 December; weather good; temp. 35°.

Mrs. Alice B. Gilreath (compiler).

CHATTANOOGA—All points within a 15-mile diameter circle, center on the National Cemetery; fields and pastures 35%, woodlands 20%, ponds and lakes 15%, creeks and rivers 15%, roadsides 10%, and residential areas 5%. 28 December: 05:00 to 19:00. Temp. 33° to 47°; wind 0-6 m.p.h. from the SW, some very light rain in the early a.m., cloudy all the p.m., some patches of snow in the higher elevations and shaded areas. Eleven observers in seven parties.

The six White-winged Scoters (2 males, 4 females) were observed by DeVore and Garrett immediately above Chickamauga Dam on the lake. The birds were first seen in flight over the lake as they were circling a raft of other waterfowl. The white speculum was clearly visible. After landing on the lake the birds were again brought under observation, this time with a 20x scope. The white eye patch of the males was visible as the birds swam within 150 yards of the observers. The birds remained at this location all during the day and since that time there have been several additional sightings of this species from the same area.

Francis Barnwell, Jon E. DeVore (compiler), Kenneth Dubke, Dr. and Mrs. John R. Freeman, James Garrett, Gladys Nelson, Mable Norman, Beulah Parks, Lee Shafer, Veta Sliger, Mary Tunsberg.

HIWASSEE—All points within a 15-mile diameter circle, center on State Highway 58 Bridge at the Hiwassee River; agricultural fields 30%, deciduous woods 30%, creeks and rivers 15%, residential areas 10%, roadside and weedy areas 10%, evergreen woods 5%. 23 December: 06:00 to 19:00. Temp. 29° to 41°; overcast all day with somewhat lighter conditions in the late p.m. Three observers in two parties. Total party-hours 21 (12 on foot, 9 in car); total party-miles 175 (30 on foot, 145 by car).

The Bald Eagle (DeVore) was an adult and was seen perched in a large dead tree at the Hiwassee Island State Waterfowl Refuge. The Least Sandpiper and Dunlin (Dubke-Wagner) were observed at the Mouse Creek and Candies Creek area. These birds have been present all winter and are presumed to be, in part, the same group which has wintered in this area for the past several years.

Jon E. DeVore (compiler), Kenneth H. Dubke, Mark Wagner.

NORRIS—36° 13' N, 84° 15' W (All points within a 15-mile diameter circle, center BM 1062, Norris Dam, to include Clinch River, Hinds Creek, Clear Creek, Norris Lake, Cane Creek, Norris, Andersonville, Lake City mixed hardwoods, cedars, pines 55% fields and pastures 40%; towns 5%; in typical southern Appalachian ridges and valleys. 20 December: 08:00 to 16:30, clear a.m.; partly cloudy p.m.; temp. 23° to 40°; wind NNW, 0-10 m.p.h.; puddled water frozen, other water open. Ten observers in four parties. Total party-hours 49 (42 on foot, 7 by car); total party-miles 135 (21 on foot, 114 by car).

James H. Burbank (compiler), Mrs. J. H. Duggins, Richard Fitz, Gordon Hall, Frank Holland, Ben D. Jaco, Bill Jaco, Mrs. Frances Olson, Walter P. Nickell, Mrs. George Wood.

KNOXVILLE—35° 59' N, 83° 59' W, (All points within a 15-mile diameter circle, center Oak Ridge Highway and Third Creek, including Island Home, Toole's Bend, Andrew Jackson Lake, Powell Station; mixed hardwoods 30%, fields and pastures 26%, roadsides 24%, suburbs 12%, lakeside 8%). 21 December: 07:00 to 17:00, overcast; temp. 30° to 35°; wind NE 0-5 m.p.h.; rain, sleet, and snow during half of day. Eighteen observers in twelve parties. Total party-hours 82 (47 on foot, 35 by car); total party-miles 410 (50 on foot, 360 by car).

The Semipalmated Plovers were observed at close range, watched for a half hour, all field marks seen, by Muriel Monroe. The Lesser Yellowlegs was identified by Tony Koella. The Summer Tanager has been appearing regularly at a feeding station, where it has been seen by several observers.

Joshua Bonner, James Campbell, John Elson, J. C. Howell, Susan Hoyle, Tony Koella, Terry McGown, Muriel Monroe, Holly Overton, J. B. Owen, Myrtle Sanders, Boyd Sharp, Mr. and Mrs. Louis Smith, James Tanner (compiler), Gary Wallace, Mr. and Mrs. Bill Williams.

GREAT SMOKY MOUNTAINS NATIONAL PARK—35° 40' N, 83° 29' W, (All points within a 15-mile diameter circle, centered on Bullhead to include US 441 Pigeon Forge to Gatlinburg, Tenn. 73 Emerts Cove to Gatlinburg; Newfound Gap Road from Gatlinburg to Newfound Gap; Little River Road from Sugarlands to Metcalf Bottoms; West Prong Little Pigeon River; Little River; LeConte Creek; Laurel Falls; Wear Cove; Greenbrier Cove; Cherokee Orchard; Sugarlands; open farmland 15%; abandoned fields 10%; farm woodlots 5%; stream courses 15%; deciduous forest 25%; pine forest 5%; spruce-fir forest 15%; towns 5%; roadsides 5%). 28 December, 06:45 to 17:00. Overcast, light drizzle and light rain all day. Temp. 16° to 44°. Wind variable in direction, 0-10 m.p.h. Four inches snow in lower elevations, 22 inches in higher elevations. Twenty-eight observers in nine parties. Total party-hours 66 (30 on foot, 36 by car); total party-miles 273 (32 on foot, 241 by car).

Winnifred E. Brown, Danny Ellis, Maurice Grigsby, David Hassler, Robbie Hassler, Joseph C. Howell, Greg Jackson, Tony Koella, Mrs. George McGown, Kevin McGown, Mary McIlwain, Chris McMillan, Robert A. Monroe, Mrs. R. A. Monroe, Louise Nunnally, Pauline G. Ryder, Richard Ryder, Terry Satterfield, Johneta L. Smith, Louis F. Smith, Jr., Bill Williams, Irene Williams, George Wood, Hedy Wood, Richard C. Zani (compiler).

GREENEVILLE—All points within a 15-mile diameter circle, center three miles west of Greeneville on Highway 11E. Woodlands 50%; fields, farm lands, and stream borders 40%; towns and residential 10%. 27 December: 08:00 to 17:00. Temp. 26° to 33°; winds 0-3 m.p.h., cloudy, snowing a.m., clearing p.m., snow up to five inches deep on ground. Fifteen observers in ten parties. Total party-hours 34, total party-miles 56 (6 on foot, 50 by car).

Elizabeth Burleson, Mrs. Marjorie Clemens, Mrs. Chester Darnell, Mrs. Elizabeth Edens, Mr. and Mrs. William Fischer, Mr. and Mrs. King Gaut, Richard Kulmeyer, Mr. and Mrs. Irving Landmark, Mr. and Mrs. Richard Nevius (compilers), Richard Sievert, Mrs. Royal Spees.

ELIZABETHTON—All points within a 15-mile diameter circle, center Wilbur Dam, to include Wilbur Lake, major portion of Watauga Lake, parts of Watauga and Doe Rivers, parts of Holston and Iron Mountains, city of Elizabethton; lake borders 5%, stream borders 50%, woodlands 30%, weed fields 15%. 28 December: 07:00 to 17:00. Temp. 16-40° F.; wind light and variable; clear a.m., cloudy p.m.; all waters clear; 12-16 inches snow on ground throughout area. Ten observers in five parties. Total party-hours 27 (19 on foot, 8 by car); total party-miles 156 (12 on foot, 144 by car).

The Swainson's Thrush and Chipping Sparrow were observed by Bill Bridgforth, Dr. Jerry W. Nagel, Pete Range, and Charles R. Smith. Both species were observed at close range (15-30') for periods of 10-15 minutes with 7x and 10x binoculars.

Mr. and Mrs. Fred W. Behrend, Bill Bridgforth, Mrs. Harold Dillenbeck, Jo Ann Dillenbeck, Joy Dillenbeck, Roby May, Dr. Jerry W. Nagel, Pete Range, Charles R. Smith (compiler).

KINGSPORT—36° 30' N, 82° 31' W (All points within a 15-mile diameter circle, center Pactolis, to include parts of Bays Mt., borders of Holston River, Patrick Henry and Boone Lakes; fields 15%, woods 20%, residential 25%, lakes, rivers, and shores 40%). 27 December: 07:30 to 17:30, cloudy with occasional light rain and snow; temp. 24° to 30°; no wind; 10 inches of snow on ground, preventing roadside parking. Eight observers in eight parties. Total party-hours 26 (21 on foot, 5 by car); total party-miles 78 (13 on foot, 65 by car).

The Red Crossbills were seen by Finucane on Bays Mt.

Roy Allen, Marie Brown, Tom Finucane (compiler), Ed Gift, Martin King, Arthur Smith, Ann Switzer, Jonathan Wert.

BRISTOL—All points within a 15-mile diameter circle, center at junction of Route 647 and Route 654, to include Bristol, South Holston Lake and River; fields and farmland 40%, mixed deciduous forest 25%, lakes and rivers 15%, towns and residence 10%, misc. 10%. 21 December; 07:10 to 18:00. Temp. 25° to 38° F; wind NE 2-10 m.p.h.; ground bare, water open. Twelve observers in eight parties. Total party-hours 47½ (30¼ on foot, 10¼ by car, 7 by boat); total party-miles 283 (14 on foot, 211 by car, 58 by boat).

The Common Merganser was found at Avens Bridge, Va. on South Holston Lake by Wallace Coffey and Brent Rowell. A good study with a 30x Balscope. Gerry Delantonas identified the Savannah Sparrow near Saddle Dam, Tenn. at South Holston Lake. Both species represent first records for the Bristol count.

Ann Cantwell, J. Wallace Coffey (compiler), Mrs. Ernest Dickey, Mr. and Mrs. Gerry Delantonas, David McPeak, Mr. and Mrs. C. T. Ottenfeld, Brent Rowell, Enno VanGelder, Johnny Wood.

ANNUAL AUTUMN HAWK COUNT

By Thomas W. Finucane

The 1969 T.O.S. total was about 4500, our lowest since 1964. In contrast, stations where hawk migration is studied northeast of the T.O.S. area reported record highs in 1969, as in 1968, when we also had a record count of 24,000. Analysis of the 1969 fall migration of the Broad-winged Hawk is in preparation by Aaron Bagg for publication in the *Audubon Field Notes,* on the basis of our data and data from many other sources.

Fluctuations in the numbers of Broad-winged Hawks observed in fall migration are related to variations in weather. There are many ways for the weather to determine the character of the migration. It is possible, for example, to account for what seems to be a steady increase in the fall Broad-wing migration in Pennsylvania and in our areas by taking note of the decrease in the numbers counted at major stations on the Great Lakes. There is no simple explanation for this effect, but the existance of regular weather cycles of 10 to 12 years has been firmly established, and these have been shown to be part of a system of larger cycles. Before any evaluation of the effects of such cycles on the fall hawk migration can be made, we need better comparisons of year-to-year variations in the counts at all stations in the United States and Canada.

It is well known that hawks migrate on a roundabout course. In particular, they do not cross the Great Lakes. Furthermore, when they encounter a large area of heavy overcast, they detour. The Broad-winged Hawks migrate where they find updrafts of the kind for which they are adapted. Such updrafts are not found over water and are suppressed over land areas under clouds and rain. In 1969 there was an area of rainy weather just north and east of our stations, during the days when our heaviest hawk migration is expected. Since these hawks are generally heading southwest, they probably would bypass our area by flying west on a course north of it.

Besides depressing the counts, heavily overcast skies change the migration routes of hawks traveling within the area under clouds. In the T.O.S. project the effect has nearly always been relatively high counts at low-altitude stations. This effect has been mentioned before, in connection with counts made by Mr. Scott in Nickelsville and simultaneous counts at the Mendota Fire Tower lookout. We have noticed also that under overcast skies the Rogersville Kyles Ford lookout has higher counts than the Mendota, although we have been listing both at 3000 ft. Now we find the former to be listed as only 2400 ft. high, on maps we have recently purchased from the TVA. On four of the five days of simultaneous observations from these stations higher counts were made at the lower altitude station in 1969.

On a rainy September day in 1957 at the FM transmitter on Bays Mt. (2300 ft.), we counted 19 migrating hawks in four hours: a Sharp-shin, 16 Broad-wings, a Marsh Hawk, and an Osprey. During a week of clouds and rain in September, 1969, when I might have stayed all day on the Mendota Fire Tower without seeing a single Broad-winged Hawk, I tried the FM location on Bays Mt. again and counted four in 1½ hours. The only other hawk watch on Bays Mt. in 1969 was on the River Mt. Fire Tower (2400 ft.) where Bill and Dick Finucane saw only one Broad-wing in 6½ hours. in good weather in the heart of the migration season for the species. In previous years Tom Odom's data have demonstrated that River Mt. has low counts on days when the Mendota Fire Tower has its highest counts.

For a period of eight days, 17 to 25 Sept., exactly in the middle of our Broad-wing migration, the Mendota Fire Tower total was only 125, including 109 on 18 Sept., when there was a slight improvement in the weather. The next two days were cloudy and rainy, but we did spend some time on the lookout to check the weather. Then conditions improved on 21 Sept., but we had only eight hawks in six hours of observation. Mr. Scott, however, had counted eleven on his way to the lookout. He also had heard from a motorist that there was an extensive area of heavy rain not far north from our lookout that morning. (This was the day Frances Olson saw a flight of 300 Broad-wings in Knoxville). Next day, 22 Sept., the count at the Mendota Fire Tower was zero. The following three days were rainy (including the day I saw four hawks on Bays Mt.) Then came a clear day, 26 Sept., the day of the big count in the Chattanooga area. We had 155 at Mendota and 660 on the day after. The weather was getting worse, however, and next day, 28 Sept., the count on Mendota was zero again.

It is not only in bad weather that the Mendota Fire Tower has poor counts. When the sky is perfectly clear, the migration may proceed on lower ridges. This happened, for example, in 1960, when the T.O.S. total exceeded 10,000, but the Mendota Fire Tower count was only 845 for 60 hrs. or observation. Large hawk flights were seen at four low-altitude locations: Kingsport; the gap below the Rogersville Kyles Ford Tower Knob; Knoxville; and especially in Chattanooga, where Mrs. Crownover reported 4985 Broad-wings flying at all levels past the Elder Mt. Fire Tower (1880 ft.) on 25 Sept. 1960. If high flight is more efficient, then clear skies do not always provide the best conditions for hawk migration. But in the best weather for hawk migration the flights may be too high to be visible from our lookouts. Or perhaps in the best weather for migration the hawks are scattered rather than concentrated, or perhaps they ride in the updrafts generated by advancing cold fronts. (See *The Migrant* 31:2, 1960).

Good hawk counts are more difficult to explain than poor hawk counts. If atmospheric conditions are such that the distinction between good lookouts and surrounding areas is enhanced, a larger fraction of the flight will appear at the lookout. As I remember some of the large flights I saw in 1968, they seemed to be moving more slowly than flights we have observed in other years. In 1968 we saw large, swirling masses drifting along where we had in other years seen streams of hawks that never wavered from direct flight. So perhaps the best conditions for hawk migration are not the best conditions for hawk counts.

The halfway point in the data came on 26 Sept., when 1136 hawks were recorded in the Chattanooga area, including 886 recorded in five hours on the Dunlap Tower Lookout by Gene and Adele West.

Recorded hours of observation were 249 (about average), but the number of observation sorties was far above average. Besides the items in Table 1,

TABLE 1

ANNUAL AUTUMN HAWK COUNT 1969

No.	Date	Obs.	Hrs.	Area	Wind	Sky	T.	Shn	Cpr	Rdt	Rsh	Bwg	Msh	Osp	SpH	Undnt
1	8/30	R	3	E	E	0	70	-	-	-	-	15	-	-	-	-
2	31	D	5½	D	1-5 ESE	3	70	-	-	-	-	1	-	-	-	-
3	31	W	1½	R	1-5 ESE	3	70	-	-	-	-	3	-	-	-	-
4	9/1	W	½	R	0	3	75	-	-	-	-	2	-	-	-	-
5	1	CR	6	M	-	-	-	-	-	-	-	-	-	-	-	-
6	7	DM	4	D	1-5 WSW	0-4	75	-	-	-	-	3	-	-	-	-
7	9	K	6	D	2 NNW	0	65	-	-	-	-	6	-	-	1	-
8	10	CE	4	M	1-4	-	53	-	-	-	-	68	-	-	2	-
9	11	F	2½	M	2 E-NE	1-3	65	1	-	1	-	120	-	-	-	-
10	12	W	1	R	0	2	75	-	-	-	-	38	-	-	-	-
11	12	CFb	7½	M	1 E	3	60	-	-	-	-	62	-	1	3	-
12	13	LO	8	K	1 SE	0	63	-	-	3	-	173	-	1	-	5
13	13	CR	4	Q	-	-	-	-	-	-	-	27	-	-	-	-
14	13	ASY	8	M	2 N	1	-	-	-	2	-	32	-	-	-	-
15	14	DWd	5	D	1-2 SSE	1	76	-	-	-	-	11	-	-	-	-
16	14	H	1½	L	2-4 SE	2	70	-	1	-	2	27	-	-	-	-
17	14	LNO	8	K	4 E-SE	1	68	-	-	3	-	64	-	-	-	4
18	14	R	2	Q	-	4	58	-	-	-	-	7	-	-	1	-
19	14	UV	6½	V	0	1	73	-	-	1	-	1	-	-	-	1a
20	15	K	4	D	2-4 E	0	69	-	-	1	-	11	1	-	-	-
21	15	FSV	8	M	-	-	-	-	-	3	-	171	-	1	-	5
22	16	K	4	D	3-5 SE	1	68	-	-	2	-	-	-	-	-	-
23	16	ASV	6	M	3 E	1	66	-	-	-	-	147	-	-	1	1
24	16	CE	3	H	-	-	-	-	-	-	-	19	-	-	-	-
25	17	V	7	K	2-5 SW	5-3	65	-	-	4	-	16	-	-	-	-
26	17	F	7	M	3 SE	4	80	-	-	-	-	9	-	1	-	1b
27	18	W	4	D	1 E	3	76	-	-	-	-	15	-	-	-	-
28	18	SV	7½	M	2-6 NW	3	73	2	-	2	-	109	-	-	1	-
29	20	FS	3	M	3	5	-	-	-	-	-	1	-	-	-	-
30	21	W	1	R	0	4	-	-	-	-	-	152	-	-	-	-
31	21	B	½	N	-	-	-	-	-	-	-	300	-	-	-	-
32	21	T	6¼	K	2 E-SE	0	68	-	1	3	-	29	-	-	-	2
33	21	FGS	5¾	M	3 SE	1	65	-	-	1	-	6	-	-	-	1
34	21	S	½	Z	3 SE	1	65	-	-	-	-	11	-	-	-	1
35	21	CR	5½	H	0-5 SE	-	62	-	1	2	-	-	-	-	1	-
36	22	CPS	2¾	M	0-3 E	2	67	-	-	1	-	-	-	-	-	-
37	24	W	3	D	0-1 NW	4	-	-	-	-	-	12	-	-	-	-
38	24	F	1½	B	0	4	-	-	-	-	-	4	-	-	-	-
39	25	W	3	D	0-3 WNW	4-0	-	-	-	-	-	8	-	-	-	-
40	25	W	1½	S	0-3 WNW	0	-	-	-	-	-	66	-	-	-	-
41	26	W	5	D	1-2 N	1	-	-	-	-	-	886	-	-	-	-
42	26	Q	½	X	1-2 N	1	-	-	-	-	-	250	-	-	-	-
43	26	AFJ	6	M	0-1 NE	0	63	2	1	-	-	155	-	-	-	3
44	27	WX	3	D	3 SE	1	-	-	-	-	-	30	-	-	-	-
45	27	Z	6	Q	1-2 SE	1	68	-	-	-	-	13	-	-	1	-
46	27	T	8	K	1 SE-W	1	68	4	1	2	3	191	-	1	-	1a 2b
47	27	AFI	8½	M	0-3	2	64	2	2	-	1	653	-	1	-	1
48	28	D	5½	D	2-5 NNW	0-2	70	-	-	-	-	150	-	-	-	-
49	28	Wh	2	R	0-1 N	2	70	-	-	-	-	116	-	1	-	-
50	28	t	4¼	K	0-2	4	-	-	1	1	-	4	-	-	-	-
51	28	F	4¾	M	3-4 NE-N	4-0	-	-	-	3	1	-	-	-	-	-
52	30	K	4	D	2 S-NW	1	62	-	1	-	-	-	-	-	-	-
53	30	F	7½	M	2-0 SSE	2	65	-	-	-	-	21	-	-	-	1
54	10/3	F	6	M	1 NW	3	65	3	-	1	-	-	-	-	2	2a
55	9	F	9	M	3-0 SE	0	60	-	-	-	-	-	-	-	-	-
TOTALS			249					14	9	36	7	4215	1	7	13	31

TABLE 2

Observations in the Roan Mt. Area by Mrs. Swindell

	8/22	24	25	26	27	28	29	31	9/1	7	9	16	17	18	19	22
Coopers Hawk	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	3
Red-tailed	-	-	5	-	-	-	-	-	1	-	2	-	-	4	-	6
Broad-winged	9	6	12	14	8	12	-	9	2	-	7	-	-	1	2	1
Marsh Hawk	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	3

	9/25	26	27	28	30	10/1	3	4	10	24	29	30	31	11/2	18
Sharp-shinned	4	3	-	-	-	-	-	1	-	-	-	-	-	-	-
Coopers Hawk	2	-	2	1	3	2	2	-	1	-	-	-	-	-	-
Red-tailed	26	5	2	1	-	-	2	-	3	4	-	-	-	-	-
Red-shouldered	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Broad-winged	87	12	5	3	-	-	-	-	-	-	-	-	-	-	-
Marsh Hawk	1	-	-	-	-	-	-	-	-	-	3	2	1	1	-
Sparrow Hawk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

we made a few October and November observations from four stations on the Clinch Mt. and Powell Mt. On 29 October, we saw a Golden Eagle making several dozen circles in the valley north of the Mendota Fire Tower before disappearing down range. Although this was the first Golden Eagle recorded at the Mendota Fire Tower since 12 October 1957, the record has little significance since we spend very little time observing hawks at this lookout after the first week in October. On the other hand, Mrs. Swindell's observations continued into November, in the Roan Mt. area, with better results than ours on the Clinch and Powell (See Table 2).

KEY TO REPORTERS

A—Charlotte Finucane, Kingsport; B—Frances Olson, Norris; C—Wallace Coffey, Bristol; D—Jon DeVore, Chattanooga; E—Johnny Wood, Bristol; F—Thos. Finucane, Kingsport; G—Mr. and Mrs. Roy Allen, Mr. and Mrs. Arthur Smith, Kingsport; Robert Quillen, Bristol; H—Mrs. Chester Darnell, Mrs. Irvin Landmark, Greeneville; I—Mr. and Mrs. Roy Allen, Barney Finucane, Peggy Ferrell, Cub Den 2, Pack 88, Kingsport; J—Mrs. David Hedberg, Kingsport; K—Ken Dubke, Chattanooga; L—Tom and Carol Finucane, Knoxville; M—Max Ley, Chattanooga; N—Mrs. Richard Nevius, Mrs. Helen Reed, Greeneville; O—Tom Odom and Tom Odom III, Kingsport; P—Bob Smith, Bristol; Q—Charles Sterchi, Chattanooga, R—Brent Rowell, Bristol; S—E. E. Scott, Nickelsville, Va.; T—Tom Odom; U—Dickie Finucane; V—Bill Finucane; W—Mr. and Mrs. Eugene West, Chattanooga; X—Carl Gevers, Chattanooga; Y—Gracie, Barney, Marion Finucane, Robin Ferrell, Cub Den 2, Pack 88; Z—Mr. and Mrs. Ottenfeld, Mr. and Mrs. Nunley, Mr. and Mrs. Coffey; b—Don Wiley, Kevin Henry, Kingsport; d—Maxine Crownover, Mr. and Mrs. H. L. Sliger, Chattanooga; h—Kay Bosworth, Chattanooga.

KEY TO OBSERVATION STATIONS

B—Bays Mt. FM Tower, 2300 ft.; D—Dunlap Fire Tower, 2637 ft.; E—2227 Edgemont, Bristol City Limits, 1672 ft.; H—Haytor's Gap Knob Fire Tower, 4208 ft.; K—Rogersville Kyles Ford Fire Tower, 2401 ft.; L—Meadow Creek Fire Tower, 2875 ft.; M—Mendota Fire Tower, 3018 ft.; N—Knoxville, 1000 ft.; Q—McQueen's Knob Fire Tower, 3885 ft.; R—Red Bank, residence of E. M. West; V—River Mt. Fire Tower, Kingsport, 2397; X—Hixon High School, near Chattanooga; Z—Moccasin Ridge, 2200 ft.; S—Signal Point Park, 1620 ft.

IN MEMORIAM

RALPH L. DUNCKEL

Ralph L. Dunckel, 66, died of a heart attack during the night of 7 December 1969, after spending his last day happily banding White-throated Sparrows and Purple Finches at his home in suburban Cookeville. With his passing, organized "birding" in the entire Highland Rim area of the Upper Cumberlands lost its earliest guiding spirit and one of its most knowledgable participants.

As a boy in his native New York (he was born in Fort Plain in 1903), he organized his first bird club. It had four members, and a fine of one cent was levied against those who missed a meeting. (Mrs. Aline Dunckel still possesses a precious copy of the minutes of the meetings.)

After a number of years in military service, he was forced into temporary retirement by heart trouble. He and Mrs. Dunckel moved to the Ozarks, in Arkansas, where bird-watching served as a therapeutic treatment which restored him soon to a normally active life.

He came to Tennessee Tech in 1956 as professor of Mechanical Engineering, and in 1957 set about organizing bird lovers of the area into the Upper Cumberland Bird Club. He took the lead in sponsoring a three-year series of Audubon Screen Tours, beginning in 1958. He served three terms as president of the Upper Cumberland Bird Club, taught bird identification through their songs to Boy Scout groups, and heightened interest in bird lore throughout the area by the example of his enthusiasm and knowledge.

He spent three years in Indonesia in the early 1960's at the National Institute of Technology, at Bandung, on an A.I.D. assignment from the University of Kentucky. This experience broadened his knowledge of the exotic birds of the world.

In the words of one of his many friends, "Ralph L. Dunckel was a man of dignity of bearing, yet never lacking in his concern for those around him; a man who was gentle yet strong."

DR. SIDNEY MCGEE, Tennessee Technical University, Cookeville, 38501.

ROUND TABLE NOTE

EVENING GROSBEAKS AT NASHVILLE—My year of the Evening Grosbeaks (*Hesperiphona vespertina*) began 23 December 1968, with the arrival of a beautiful male. My husband and I were surprised and excited because we had never seen an Evening Grosbeak before. Within the hour we had every available container filled with sunflower seeds.

Our efforts were rewarded by the arrival of a female on 28-29 December, and a male and female on 6-7 January. On 8 January, 2 males and 2 females came. The number gradually increased until on February, a flock of 48 Evening Grosbeaks were counted in the yard at one time. During the sleet and snow on 15 February, 37 arrived later than usual, all with frozen tail feathers. A week later, 23 February, 53, the largest number counted at one time were in the yard. This number gradually decreased until only 2-7, all females were seen from 1 through 9 April. On 10 April, small flocks of approximately equal numbers of males and females started to come again. These had greenish beaks, while the ones seen during the winter had either yellow or bone colored beaks. No Evening Grosbeaks were seen 27 April. On 28 April, flocks of 16-30 appeared. This time the males were more numerous than females. One day 13 males and 2 females were on the feeder at once. Birds kept coming until 5 May, when the last three females were seen. Evening Grosbeaks were absent from the feeders only one day, 27 April, from 6 January until 5 May and on this day a single male Rose-breasted Grosbeak was there. The largest number of males counted at one time was 17. Judging from counts of numerous small flocks, they consisted of about one third males all winter.

During the winter, the Evening Grosbeaks appeared about twenty minutes after daybreak, except for one sleeting, snowy day, and left between 12:30 and 13:30 each day. This habit did not change even though it started getting light earlier each day. After 10 April, when the flocks began to build up they appeared about 07:30 and would stay until 15:30-16:00. Without exception, the largest flocks came on cloudy or rainy days. All winter they seemed to prefer to feed and perch in the shade; in March and April, they spent most of their time in the sunny tree tops preening.

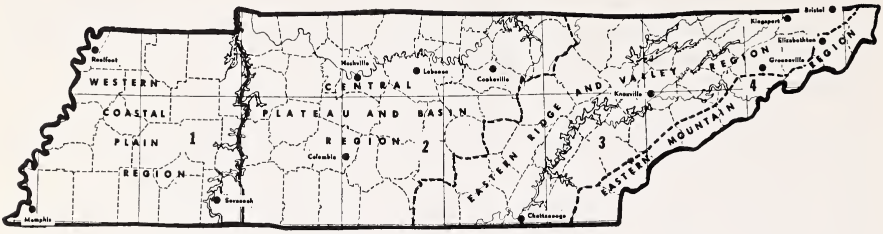
The grosbeaks would eat at the window tray while I sat inside. On one occasion, when I ran the vacuum cleaner, they lined up on the window sill and peered in as though fascinated by the sound. During their daily visits, they constantly bickered among themselves for space at the feeder but would let small birds crowd into their group. One day I saw a tiny goldfinch peck two female grosbeaks until they moved away.

Mr. H. E. Parmer and Mrs. Carol Knauth alerted members of the Nashville Chapter of T.O.S. to our flock of unusual visitors. Many members came to watch from the window with us. Mrs. Goodpasture banded 25 of the grosbeaks, plus several each of the other species. I fed a little over 200 lbs. of sunflower seeds and at least 50 lbs. of mixed seeds. In addition to the open window feeder at second story level, there were 3 other feeders close by in the yard. Four large trees offered perching-preening areas.

Mrs. George R. Miller, 573 Croley Drive, Nashville.

THE SEASON

Charles R. Smith, *Editor*



The weather for the months of November, December, and January may be described accurately with a single statement. It was very cold; colder than ever recorded in some areas.

According to data from the U. S. Weather Bureau, November temperatures were the coldest ever recorded for Chattanooga for that month. Memphis experienced its coldest November in the last ten years. It was especially cold in the Ridge and Valley and Mountain Regions during that month. A statewide cold spell on 14 and 15 November set new daily record low temperatures for northeastern Tennessee, Chattanooga, Knoxville, and Nashville. A second cold spell from 20 to 29 November was not as severe as the first. Precipitation was below normal and unevenly spaced throughout the month, with many areas becoming quite dry by the end of November. The first measurable snowfall occurred on 14 November, with 1-4 inches over the mountains and little or none across the rest of the state.

December continued the cold trend, with temperatures 4-5 degrees below average across the state. Precipitation was from 2-4 inches above average for December. A period of relatively heavy snow occurred from 25-27 December, with some heavy rain on 29 and 30 December, across the state.

January was very cold and very dry. Most of the precipitation fell as snow, but the total precipitation still remained 2-5 inches below normal for most of the state. It was the driest January since 1963 for the state as a whole. The eastern portion of the state experienced the coldest January since 1940, according to U.S. Weather Bureau data.

The effects of the severe winter weather remain difficult to assess with respect to avian activity. My impression is that the overall populations of both land and water birds appeared somewhat reduced. However, it may be that only the activity of the bird-watchers experienced the reduction! Unfortunately, data from the Ridge and Valley Region were not available for this period. Therefore, it is difficult to accurately evaluate the season for the state.

Unusual observations were numerous, especially from the Central Plateau and Basin Region. Some of the more notable records follow: Common Scoter, Black-headed Grosbeak, and Oregon Junco from the Western Coastal Plain; White Pelican, Whistling Swan, White-fronted Goose, White-winged Scoter, Goshawk, wintering Catbird, and Snow Bunting from the Central Plateau and Basin; wintering Catbird, and Brewer's Blackbird from the Mountain Region.

Reports of wintering Brown Thrashers remain widespread across the state, indicating that that species might be successfully extending its winter range northward. Details of the above observations and additional observations may be found in the reports which follow.

WESTERN COASTAL PLAIN REGION — *Loon-Sparrows:* Common Loon: 31 Dec. (7) S. Canada Goose: 31 Dec. (35) S. Common Scoter: 22 Feb. (1, female) HL (LC). Bald Eagle: 31 Dec. (2) S. Bonaparte's Gull: 14 Dec. (5) HL (BC, LC). Tree Swallow: 22 Feb. (1) HL (BC, LC). Red-breasted Nuthatch: more than usual all season, 13 Dec. (12) S. Cedar Waxwing: 31 Dec. (522) S. Black-headed Grosbeak: 19 Jan. to 1 Mar. (1) SB home, Raleigh, near M (SB, LK). Dickcissel: 24 Dec. (1, possibly immature) M (GH). Evening Grosbeak: 31 Dec. (12) S. Purple Finch: many records in region, 31 Dec. (77) S. Pine Siskin: many records in region, 13 Dec. (140) S. Oregon Junco: 24 Dec. (1) M (HD), 31 Dec. (1) H (EC). Vesper Sparrow: 22 Jan. (1) S (DP). White-throated Sparrow: back to usual numbers this winter, 31 Dec. (132) S.

Locations: H—Henderson, HL—Horseshoe Lake, Crittendon Co., Arkansas, M—Memphis Area, S—Savannah Area.

Observers: SB—Mrs. Stanley Buchman, EC—Mrs. Ed Carpenter, BC—Ben B. Coffey, Jr., LC—Lula Coffey, HD—Mrs. Henry Dinkelspiel, GH—George Hervey, LK—Mrs. Leslie Kostka, DP—David Patterson.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Loons-Geese:* Common Loon: (1-7) thru 5 Jan. WR (KHD), 9 Nov. (3) OHL (HEP *et al.*), 16 Nov. (1) PPL (MLB, ROH), 5 Jan. (1) BT (RDH). Horned Grebe: peak (139) 15 Dec. to (18) end of period WR (KHD); peak OHL 31 Jan. (27) (JHR). Pied-billed Grebe: 16 Nov. (10) PPL (JHR); from (9) 4 Nov. to a peak of (65) 8 Dec., then down to (25) 30 Jan. WR (KHD); (1-4) NA. White Pelican: 24 Nov. (1), 15 Dec. (1) Big Sandy Unit, TNWR (GNB). Double-crested Cormorant: 4, 5 Nov. (1) LD (RTH), 15 Nov. (1) DRU (MLB, ROH). Great Blue Heron: occasional reports (1-2) entire area. Whistling Swan: 4 Jan. (5) upper OHL (GBW), 13 Jan. (1) DRU (GNB). Canada Geese: to (135) during entire period WR (KHD); 9 Nov. (44) OHL (HCM *et al.*), 15 Nov. (2000) DRU (NC), about (33), (some color-collared for locally breeding birds) OHL entire period (NC); 24 Nov. (50) BT (RDH), (24-70) during period LD (RTH). White-fronted Goose: 8 Dec. (1) WR (KHD). Blue Goose: 9 Nov. (4) OHL (HEP *et al.*), (1) entire period BL (NC).

Ducks: Mallard: 15 Nov. (5000) DRU (NC), 8 Dec. (1250) down to (15) 30 Jan. WR (KHD), 31 Jan. (150) OHL (JHR), well below normal NA. Black: 15 Nov. (300) DRU (NC), (200+) during period WR (KHD), to (200) by 5 Jan. OHL (MLB, JHR). Gadwall: 4 Nov. (34) WR (KHD), 16 Dec. (130) BT (RDH), (2-5) during period NA. Pintail: 15 Nov. (20) DRU (NC), 8 Dec. (40) WR (KHD), 17 Dec. (3) RL (AT), 16 Dec. (8) BT (RDH), 31 Jan. (50) OHL (JHR). Green-winged Teal: 29 Nov. (13) all males, BL (HEP), (1-12) WR (KHD) during period. American Widgeon: 15 Nov. (25) DRU (NC), 18 Nov. a peak of (95) down to (26) 30 Jan. WR (KH), 23 Dec. (71) RL (MLB), 31 Jan. (100+) OHL (JHR). Shoveler: 8 Nov. (3) (HCM, HEP) to 5 Jan. (6) (JHR) both RL, 16 Dec. (36) BT (RDH). Wood: 3 Nov. (34) ACM (JHR), 26 Nov. (9) RL (MLB), 8 Dec. (1) WR (KHD) last report. Redhead: 13 Dec. (5) RL (AT), 30 Jan. (33) WR, (KHD), 31 Jan (1) CL (JHR). Ring-necked: from a peak of only (45) 18 Nov. to (25) 30 Jan. WR (KHD), 31 Jan. (100) upper OHL (JHR), very scarce during period NA. Canvasback: from (13) 18 Nov. to (161) 30 Jan. WR (KHD), 26 Dec. peak of (25) RL (AT), 31 Jan. (7) CL (LOT). Lesser Scaup: up to a peak of (460) 20 Jan. WR (KHD), 27 Nov. (83) CL (MLB), 31 Jan. (74) upper OHL (JHR), well below normal around NA. Common Goldeneye: late, first 24 Nov. (5) RL (MLB), from 8 Dec. (1) to 20 Jan. (51) WR (KHD), peak RL 30 Nov. (13) (JHR), peak OHL 31 Jan. (27) (JHR). Bufflehead: 1 Nov. (4) (MLB), to 27 Nov. (21) (JHR) both CL, from 18 Nov. (2) to 30 Jan. (77) WR (KHD), few during period RL. Oldsquaw: 10 Nov. (1) RL (MLB), 30 Nov. (1) H (FM) and (4) RL (JHR), 5 Jan. (10) DRU (GNB). White-winged Scoter: 2 Nov. thru 24 Dec. (2), 22 Dec. (3) (AT) both RL, 25 Jan. (1) dam OHL (FA, *et al.*), 30 Jan. (3) WR (KHD). Ruddy: 1 Nov. (5) CL (JHR), from 18 Nov. (3) to 30 Jan. (31) WR (KHD), 26 Dec. (6) RL (AT, MLB). Hooded Merganser: 15 Nov. (15) DRU (NC), from 18 Nov. (6) to 5 Jan. (193) then down to (1) 30 Jan. WR (KHD), few NA. Common Merganser: 16 Dec. (8) BT (RDH), 30 Jan. (8) WR (KHD), 31 Jan. (4) OHL (JHR). Red-breasted Merganser: 12 Jan. (2) WR (KHD), first report to writer in three years.

Vultures-Hawks: Turkey Vulture: absent NA Dec., Jan. Black Vulture: 26 Dec. roost (71) ML (MLB), 30 Jan. roost WR (35) KHD). Goshawk: 27 Dec. (1) mature plumage RR (AFG *et al.*) Sharp-shinned Hawk: "(2) thru period after birds at feeders" BT (RDH), 11, 13 Jan. (1) LD (RTH). Cooper's Hawk: 24 Jan. (1) CH (MLB, JHR) only report. Golden Eagle: 23 Nov. (2), 13 Dec. (1) WB (HB). Bald Eagle: 15 Nov. (2) DRU (NC), 16 Dec. (2) BT (RDH), 12 Jan. (1) imma. WR (KHD); (1-5) during entire period, with the (5) being 24 Dec., LD (RTH). Marsh Hawk: 3 Nov. (1) TJ and (2) ACM (MLB, JHR), 19 Nov. (1) BL (HEP), 23 Dec. (1) BL (JHR), 12 Jan. (1) W (KHD), 18 Jan. (1) PPL (ROH), most records for several years NA. Osprey: 19 Nov. (1) PPL (ROH), first NA Nov. record in 15 years.

Coots-Gulls: American Coot: 4 Nov. (10,000) down to (125) 12 Jan., then to (832) 30 Jan. WR (KHD), 1 Nov. (148) OHL (JHR) about constant during period, as were (100-150) RL, 16 Nov. (113) PPL (JHR). American Woodcock: 1 Nov. (12) LD (RTH), 5 Nov. (3) BT (RDH). Common Snipe: 1 Nov. (4) CL, (14) OHL (JHR), 27 Nov. (2) BL (JHR), (2) wintering PPL (ROH). Spotted Sandpiper: 5-11 Nov. (1) BL (HEP), only report. Lesser Yellowlegs: 1 Nov. (3) OHL (MLB, JHR), 15 Nov. (2) DRU (NC). Pectoral Sandpiper: 9 Nov. (2) CL (HCM, HEP), 15 Nov. (1) DRU (NC). Least Sandpiper: 1 Nov. (8), 27 Nov. (5) CL (JHR), from (6) down to (1) 27 Dec. for period BL (JHR, HEP). Dunlin: 8 Nov. (7) (JHR), 11 Nov. (4) (HEP), 19 Nov. (8) (HEP), 27 Nov. (1) (JHR), all BL; 13 Dec. (2) PPL (ROH). Herring Gull: 19 Jan. (6) OHL seems the peak NA, few WR (KHD). Ring-billed Gull: 8 Dec. (6)

to 5 Jan. (211) WR (KHD), peak OHL (400) 26 Jan. (MLB). Bonaparte's Gull: (4-6) OHL except 3 Jan. (75) (MLB); 15 Nov. (4) PPL (ROH).

Owls-Warblers: Great Horned Owl: 9 Nov. (2) BT (RDH), 4 Jan. (1) RL (MLB). Long-eared Owl: 3 Jan. (1) H (VJW) plus many (NC), first report NA in 20 years. Ruby-throated Hummingbird: 1 Nov. (1) H (Mrs. TWC). Red-headed Woodpecker: (2) thru season BT (RDH), mid Nov.; (2) plus (3) young CV (SLM). Red-breasted Nuthatch: well above normal NA, 29 Nov. (20) CH (MLB), 17 Dec. and 31 Jan. (1) BT (RDH), (1-3) LD (RTH). Winter Wren: 22 Jan. (1) RL (AT) only report. Bewick's Wren: 17, 18 Jan. (1) LB (WmS), 31 Jan. (1) BT (RDH). Catbird: 3, 6 Nov. (1), 2 Jan. (1) LD (RTH). Brown Thrasher: many wintering reports with (1-2) WR (KHD), (1) H WB (HB), several at NA, (1) 20 Nov. LD (RTH). Robin: about 20 Dec. thru 20 Jan. a roost (800,000) S.W. Nashville; from BT Robbie Hassler says "we watched a mass migration 26 Dec. for one hour and twenty minutes". Kinglets: occasional records over area. Cedar Waxwing: a huge invasion, NA with many flocks (100-500, to (20) occasionally BT (RDH). Starling: (200,000) roosting with Robins NA in Jan. Myrtle Warbler: scarce over area with most reports being of single birds.

Blackbirds-Sparrows: Rusty Blackbird: 7 Nov. (1) RL (KAG, MLB), 9, 17 Jan. (1) H (AT), (18) wintering H PPL (ROH). Common Grackle. (10,000) 12 Jan. WR (KHD), "plentiful" BT (RDH), scarce NA. Indigo Bunting: 3 Nov. (2) TJ (MLB). Evening Grosbeak: "to (32) daily since 10 Dec." BT (RDH), (4-7) 14 Dec. thru 13 Jan. WB (HB), 19, 20 Jan. (1) LB Wm. Welty (*fide* WmS), 4 Jan (8), 28 Jan. (18) J. P. Mulhern (*fide* MLB) only report NA. Purple Finch: perhaps most ever NA with many flocks (50+) at feeders. (1-50) BT (RDH). Pine Siskin: numerous NA with many flocks (40+) and at some feeders for first time. American Goldfinch: below normal NA. Red Crossbill: 22-23 Nov. (9) BS (KAG, *et al.*), first middle Tenn. record. Savannah Sparrow: 27 Dec. (1) TJ (HEP). Oregon Junco: 7 thru 31 Jan. (1) (GRM), well photographed and seen by many (NC). Tree Sparrow: several reports (1-3) from 27 Dec. NA, with the larges being (10) during Jan. TJ (KAG). Chipping Sparrow: 27 Dec. (2) Bellevue (KAG, *et al.*) White-crowned Sparrow: 8 Nov. (3), 27 Nov. (100+), 21 Dec. (170), all BL (JHR); absent BT (RDH); few WB (HB). White-throated Sparrow: still declining entire area, unusual to have as many as (10) reported. Fox Sparrow: few NA, 24 Jan. (9) CH (JHR, MLB). Swamp Sparrow: scarce NA. Snow Bunting: 29 Nov. (2) near dam OHL Jack N. Carusos; seen regularly thru 25 Jan. by many TOS members; 31 Jan. only female found.

Locations: ACM-Ashland City Marsh, BS—Basin Springs, BL—Bush Lake, BT—Byrdstown, CL—Coleman's Lake, CV—Cookeville, CH—Craggie Hope, DRU—Duck River Unit, TNWR, LB—Lebanon, LD—Lilly Dale, ML—Murray Lane, NA, NA—Nashville Area, OHL—Old Hickory Lake, PPL, Percy Priest Lake, RL—Radnor Lake, RR—River Road, NA, TNWR—Tennessee National Wildlife Refuge, TJ—Two Jays Sanctuary, WB—Woodbury, WR—Woods Reservoir.

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Henry E. Parmer, 3800 Richland Ave., Nashville 37205.

EASTERN MOUNTAIN REGION—*Loon-Merganser:* Common Loon: 8 Nov. (4) WaL (PR), 22 Nov. (8) WaL (LRH). Horned Greebe: 8 Nov. (5) WaL (PR). Great Blue Heron: 8 Nov. (1) WaL (PR). Canada Goose: 31 Dec. (8) WaL (PR). Mallard: 22 Nov. (2) WaL (PR). Black Duck: 22 Nov. (54) WaL (LRH). Ring-necked Duck: 22 Nov. (2) WaL (PR), 21 Jan. (25) WiL (FWB). Lesser Scaup: 8 Nov. (20) WiL (PR), 21 Jan. (2) WiL (FWB). Common Goldeneye: 22 Nov. (5) WaL (PR). Bufflehead: 8 Nov. (18) WiL (PR), 22 Nov. (4) WaL (PR). Hooded Merganser: 22 Nov. (3) WaL (PR). Red-breasted Merganser: 22 Nov. (3) WaL (PR).

Hawks-Sparrows: Cooper's Hawk: 2 Nov. (1) UM (PR). Sharp-shinned Hawk: 11 Jan. (1) MC (CRS). Red-tailed Hawk: throughout November and December (1-2) HC (MS). Marsh Hawk: 2 Nov. (1) HC (MS). American Woodcock: 2 Nov. (2) UM (PR). Common Snipe: 13 Nov. (1) WiL (CRS). Great Horned Owl: 4 Dec. (2) MC (CRS). Hairy Woodpecker: 9 Nov. (1) RM (FWB), 5 Dec. (1) HC (MS). Brown Creeper: 9 Dec. (1) MC (CRS), throughout Jan. ECG (LRH). Catbird: throughout Jan. (1) E (LRH *et al.*) Brown Thrasher: throughout Jan. (1) E (LRH *et al.*) Hermit Thrush: 30 Nov. (1) HC (MS). Brewer's Blackbird: 22 Nov. (1) WaL (LRH). Evening Grosbeak: throughout period (11-75) E. Pine Siskin: throughout period (100's) RM (FWB). Fox Sparrow: 7-9 Dec. (2-3) HC (MS). Lincoln's Sparrow: 6 Nov. (1) EGC (LRH).

Locations: E—Elizabethton, EGC—Elizabethton Golf Course, HC—Heaton Creek, near Roan Mountain, RM—Roan Mountain, UM—Unaka Mountain, WaL—Watauga Lake, WiL—Wilbur Lake.

Observers: FWB—Fred W. Behrend, LRH—Lee R. Herndon, PR—Pete Range, CRS—Charles R. Smith, MS—Maxie Swindell.

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WINTER FLOCK STRUCTURE AND BEHAVIOR OF THE CAROLINA CHICKADEE

Gary O. Wallace

This study was part of a larger research project involving the winter behavior and ecology of the Carolina Chickadee (*Parus carolinensis*). The study area was located on the University of Tennessee Cherokee Farm, which is located about one mile south of Knoxville (Wallace, 1967).

Once young chickadees become independent of their parents, the young from several different family groups may combine to form loose flocks. Brewer (1961) states that early summer flocks are composed mostly of young birds. The adults tend to remain on their breeding territory for a time but later join these wandering flocks.

Carolina Chickadee flocks apparently are not led by any one bird. The first bird to move into a new feeding area might be one of the last to leave the area. Odum (1942) reported this to be true also for the Black-capped Chickadee (*Parus atricapillus*) on the Edmund Niles Huyck Preserve, Rensselaerville, New York.

I was unable to obtain much data on dominance in winter flocks of chickadees. Occasionally a "deedle-up" note was heard which Brewer (1961) calls the dominance note in the Carolina Chickadee. This note was generally heard just before or after a fight or what appeared to be a near fight. Moving birds were often seen to displace sitting birds. I was unable to tell if this was a case of a dominant versus a subdominant individual or just a moving bird having a positional advantage over a nonmoving individual. Odum (1942), working with the Black-capped Chickadee, reported that there was a well-defined dominance order in the winter flocks with males mostly dominant over females and newcomers being placed at a low position in the dominance order. Dixon (1963), working with the Carolina Chickadee in Texas, states that the organization of flocks was hierarchical with resident pairs dominant. Dixon (1965) states that the Mountain Chickadee (*Parus gambeli*) travels in small, cohesive flocks that exhibit linear or peck-right dominance relations.

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TABLE I

THE AVERAGE RATE OF MOVEMENT IN FEET
PER HOUR OF 28 CAROLINA CHICKADEE FLOCKS

Time	Dec.	Jan.	Feb.	March	Total
Morning 7:00-10:00 A.M.					
No. Observations	2	2	5	3	12
Average	1,614	1,991	1,416	1,593	1,589
Mid-day 10:00 A.M.-3:00 P.M.					
No. Observations	3	3	6	0	12
Average	767	1,230	1,105	-	1,052
Afternoon 3:00-7:00 P.M.					
No. Observations	0	2	2	0	4
Average	-	1,943	906	-	1,425
Total Observations	5	7	13	3	28
Average	1,106	1,051	1,195	1,593	1,186
Variation	0-1,635	1,048-2,598	492-2,241	1,257-1,825	0-2,598

MOVEMENT OF FLOCKS

The movement of 28 flocks was plotted on separate maps. These flocks were followed from one to three hours each. The average rate of movement was about 1,200 feet per hour. The flocks did not move at a uniform rate. Sometimes they would feed in an area with little movement and then for no apparent reason move to a new area with very little feeding during the movement. At other times they would slowly drift through the woods feeding as they went. Up to at least 825 feet might be covered in a single movement. Hinde (1952), working with the Great Tit (*Parus major*) in England, reported the same type of erratic periods of movement. He defined two types of movement: drifting movement, which takes place in the course of feeding, and integrated movements in which there is almost no feeding at all. He reported that as much as 200 yards could be covered at one time during integrated movement. Foster and Godfrey (1950), working with the British Willow-Tit (*Parus montanus*), and Odum (1942), working with the Black-capped Chickadee, reported the same type of behavior.

Table I shows rate of movement of chickadee flocks in relation to time of day. The average rate of movement was greater in the morning and less in the middle of the day. Odum (1942) reported the rate of progression to be greater in the morning than in the afternoon for flocks of Black-capped Chickadees. Hinde (1952) states that Great Tit flocks have their highest rate of movement in the morning and move much less in the afternoon.

An attempt was made to determine the approximate size of the winter flock range (Dixon, 1963). This was done by following 28 flocks and plotting their path on separate maps. These were later combined on a single map. On the basis of the limited data obtained in this study the average size of the winter flock range of the Carolina Chickadee was determined to be 22 acres with a variation in size from 15 to 25 acres. Dixon (1963) reported the flock range of the Carolina Chickadee in Texas to be 10 to 12 acres. Lawrence (1958) reported the winter feeding range of the Black-capped Chickadee to be 21 to 55 acres with an average of 36 acres. Butts (1927) stated that Black-capped Chickadees have a winter range similar to the White-breasted Nuthatch (*Sitta carolinensis*), which had a feeding range of 25 to 48 acres. The routes that the flocks followed within the winter range were very irregular, but they seemed to have favorite feeding areas and usually visited those places several times each day.

The distance between individual birds within a flock was by no means constant. At times the members of a flock would be within inches of each other while at times they would be dispersed over hundreds of cubic feet. Hinde (1952) reported that flocks of the Great Tit were well integrated in the morning but became scattered later in the day. I frequently saw large mixed flocks containing chickadees and other species of birds separate into smaller flocks which later would unite again.

FLOCK SIZE

Flock size probably varies with many internal and external factors. It is possible that such factors as vegetation, temperature, precipitation and wind affect flock size but the data in this study did not produce such information. The size of the chickadee flocks did not seem to vary with the time of day. Based on 70 flocks in which the size was estimated, the flocks were smallest in the last three hours before sunset. The average chickadee flock for this time of day was 3.6 birds per flock while the average for flocks observed throughout the day was 4.1 birds per flock. This corresponds to what Hinde (1952) found in flocks of the Great Tit. The data on flock size in the Carolina Chickadee is summarized in Table II. In Table II the columns under Carolina Chickadee include only the number of chickadees present in a flock regardless of how many other birds were associated with the chickadees. The columns under "mixed flocks" include Carolina Chickadees and any other species that were in an apparent association with the chickadees.

Odum (1942), working with the Black-capped Chickadee, reported the average number of birds in a flock to be seven or eight individuals. Kluyver (1961), working with the same species, stated that summer flocks were composed of five to ten birds. Hinde (1952) stated that Great Tits are normally found in flocks of about a dozen. Pielou (1957) reported the average number of Tufted Titmice (*Parus bicolor*) in Michigan to be six birds per flock during January. Bent (1946) says that the average Tufted Titmouse flock

TABLE II

AN ESTIMATE OF FLOCK SIZE FOR THE CAROLINA CHICKADEE
AND FOR MIXED FLOCKS INCLUDING ALL SPECIES PRESENT

	Carolina Chickadee		Mixed Flocks	
Month	Number of Observations	Average birds per flock	Number of Observations	Average birds per flock
December	13	4	3	6
January	26	4	4	10
February	20	4	4	12
March	11	5	5	10
Totals	70	4.1	16	9.8

includes two to six birds. Smith (1967) reported that Black-capped Chickadee flocks contained six to twelve chickadees. Brewer (1961), working with both the Black-capped and Carolina Chickadees in Illinois, found the average flock size for both species to be 3.3 birds per flock. Wallace (1941), working with the Black-capped Chickadee in Michigan, stated that winter flocks averaged six to eight individuals and were remarkably constant from day to day in individual composition.

FLOCK COMPOSITION

Carolina Chickadees were often found in flocks composed of a number of species. The Tufted Titmouse was found to be the most frequent associate with chickadee flocks. Titmice were associated with chickadee flocks about 55% of the time. Other species freqcently seen with the chickadees were White-breasted Nuthatch, Red-breasted Nuthatch (*Sitta candensis*), Downy Woodpecker (*Dendrocopos pubescens*), Brown Creeper (*Certhia familiaris*), Golden-crowned Kinglet (*Regulus satrapa*) and Ruby-crowned Kinglet (*Regulus calendula*).

Odum (1942), Kluyver (1961), working with the Black-capped Chickadee, Brewer (1961), working with both the Black-capped and Carolina Chickadees, and Hinde (1952), working with the Great Tit, reported a similar list of associates. Butts (1927) stated that Black-capped Chickadees spent about one-sixth of their time with White-breasted Nuthatches. Bent (1946) reported Carolina Chickadees, various sparrows and woodpeckers, Carolina Wrens, goldfinches and juncos feeding with Tufted Titmice.

SUMMARY

Carolina Chickadee flocks apparently are not led by any one bird. The first bird to move into a new feeding area might be one of the last to leave. The average rate of movement of Carolina Chickadee flocks was about 1,200 feet per hour. Their movement was not at a uniform rate. The average rate of movement was greater in the morning. The average number of Carolina

Chickadee per flock was 4.1 birds. Carolina Chickadees frequently flock with other species. The Tufted Titmouse was found to be their most frequent associate.

ACKNOWLEDGMENT

I wish to thank Dr. J. C. Howell for his valuable suggestions and critical reading of this manuscript.

LITERATURE CITED

Bent, A. C. 1946. Life Histories of North American Jays, Crows, and Titmice. U. S. Natl. Mus. Bull., 191: 393-406.

Brewer, R. 1961. Comparative Notes on the Life History of the Carolina Chickadee. Wilson Bull., 73: 348-373.

Butts, W. K. 1927. The Feeding Range of Certain Birds. Auk. 44: 329-350.

Dixon, K. L. 1963. Some Aspects of Social Organization in the Carolina Chickadee Proc. XIII Intern. Ornithol. Congr., 1: 240-258.

————. 1965. Dominance-Subordination Relationships in Mountain Chickadees. Condor. 67: 291-299.

Foster, J. and Christina Godfrey. 1950. A Study of the British Willow-Tit. British Birds. 43: 351-361.

Hinde, R. A. 1952. The Behavior of the Great Tit (*Parus major*) and some other Related Species. Leiden: E. J. Brill, X + 201 p.

Kluyver, H. N. 1961. Food Consumption in Relation to Habitat in Breeding Chickadees. Auk. 78: 532-550.

Lawrence, Louise De K. 1958. On Regional Movements and Body Weight of Black-capped Chickadees in Winter. Auk. 75: 415-443.

Odum, E. P. 1942. Annual Cycle of the Black-capped Chickadee — 3. Auk. 59: 499-531.

Pielou, W. P. 1957. Life-History Study of the Tufted Titmouse, (*Parus bicolor*) Linnaeus. Ph.D. Thesis. Mich. State Univ. (L. C. Card No. Mic. 59-2645) 76 p. Univ. Microfilms. Ann Arbor, Mich. (Dissertation Abstr. 20: 1107).

Smith, Susan M. 1967. Seasonal Changes in the Survival of the Black-capped Chickadee. Condor. 69: 344-359.

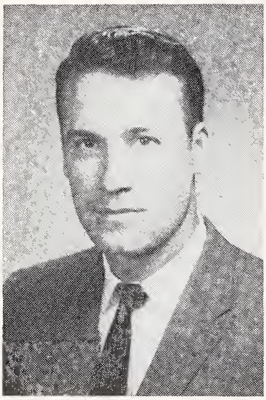
Wallace, G. J. 1941. Winter Stcdies of Color-Banded Chickadees. Bird-Banding 12: 49-67.

Wallace, G. O. 1967. Winter Feeding Habits of the Carolina Chickadee. Migrant. 38: 81-85.

Department of Zoology, The University of Tennessee, Knoxville, Tennessee, 14 October 1969.

PRESIDENTIAL MESSAGE FOR TOS

In this first presidential message since our Annual Spring meeting at Reelfoot Lake, I would like to express the appreciation of the Society to the members of the Memphis Host Chapter who worked so hard to bring us a very enjoyable meeting. Several members of our Reelfoot Lake Chapter also helped especially at the banquet and social hour on the preceding night.



The Board of Directors' meeting produced, I believe, several important decisions which should be passed on to you at this time. In the first place our proposed joint meeting with the Kentucky Ornithological Society on the week-end of 30 April - 1 May 1971 at Mammoth Cave Kentucky was approved by the Board and is anticipated by the membership of both societies with considerable enthusiasm. Our Middle Tennessee Vice President, Mr. John Ellis, and the Members of the Nashville Chapter of the TOS will work with the Kentucky Ornithological Society in the arrangement for this meeting.

For the first time in several years, we look forward to a fall meeting of our Society, which will be held at the Holiday Hills Resort in Crossville, Tennessee on the week-end of 10 October 1970. For those who can spend the week-end there, we invite you to come on Friday night and stay until Sunday noon. If your time is more limited, plan to arrive by noon on Saturday in time for lunch and a brief Board of Directors meeting immediately followed by interesting papers on the subject of ornithology during the afternoon and an evening program related to conservation activities going on at the present time within our state. Informal field trips will be available for those who may wish to attend on Saturday morning and Sunday morning and the earliest hint of fall color should be upon the beautiful foliage of the Cumberland Plateau. You should make your reservations directly with Holiday Hills Resort as soon as you plan to attend.

Our Board of Directors has voted to participate as an organization in the Tennessee Environmental Council. This newly formed coalition of organizations throughout our state interested in the preservation of a quality environment and in pollution control is seeking a wide variety of participation from groups of many interests, and I feel that this action is significant in the future of our organization. A report on the progress of this environmental council will be given at the fall meeting in Crossville.

The Committee on self-study and future plans continues to function as a source of ideas for the benefit of our society and I am happy that some of these have been translated into constructive action.

In closing this message, let me urge each of you who is capable of doing so to get out into the field, make observations of value in the study of birds, and report your findings in articles to the Migrant.

I look forward to seeing as many of you as possible in Crossville, on 10 October.

George R. Mayfield, Jr. *President*

TENNESSEE ORNITHOLOGICAL SOCIETY ANNUAL BOARD OF DIRECTORS' MEETING

9 May 1970

The 55th Annual Meetings of the Board of Directors of the Tennessee Ornithological Society was held at 14:00 on 9 May, 1970 at the Ellington Center at Reelfoot State Park.

The meeting was called to order by the Chairman, Dr. George R. Mayfield, Jr. with 32 members present in fact and two by proxy.

Mr. Ganier moved to dispense with the reading of the *minutes of the meeting of May 1969,* since they had been printed in the Migrant. The motion was approved.

The Treasurer's Report was presented by Mr. Ken Dubke, the summary of which follows:

Balance on hand 3 May, 1969	$1818.51
Income for the year	2341.44
Total	4159.95
Disbursements during year	1990.11
Balance on hand	2165.84

Endowment Fund — 346.482 shares of M.I.T. at $12.69 or 4396.86. The Treasurer's report was approved by the Board.

Report of Finance Committee: Mr. Miser Richmond for the Finance Committee reported that the audit was correct. Dr. Mayfield reappointed the same finance committee for the ensuing year.

Report of the Editor: Dr. Herndon first reported on the new cover for the Migrant and discussed the depletion of the Editorial Staff. Mr. Wallace Coffey is no longer on the Staff and Charles Smith is going away to school. There was considerable discussion of the role of the Editor in accepting or rejecting certain unusual records of birds listed in state counts. The Board of Directors reaffirmed the policy stated on the inside of the back cover of the Migrant requiring detailed verification of such unusual bird records and reaffirmed the Editor's right and duty to reject any such records which in his judgment were not adequately verified. There was a discussion of publication of a membership list which is ordinarily done every third year. The Board voted to publish this list separately from the Migrant but to include it in the mailing of the Migrant. The species index is to be continued as a part of the format of the Migrant. There was discussion of the publication of the Christmas and Spring counts in the Migrant. Some members including Mr. Ganier favored deleting the Spring count, but the Board did not take any action on this matter at this time. Mr. Ganier moved that the President, Dr. Mayfield, appoint an editorial advisory board which would furnish advice and assistance to the Editor upon request. This motion was passed and Dr. Mayfield appointed Mr. Ben Coffey, Mr. Ken Dubke, Mr. Bill Senter, Mrs. Katherine Goodpasture, and Mrs. Maxie Swindell to this board, with Mr. Coffey to serve as Chairman. Dr. Herndon requested that a new Editor-Elect be designated as soon as practicable so that this person might begin to learn the duties of Editor prior to the end of his term in May 1971. Dr. Mayfield requested the Nominating Committee to act on this matter and report to the Board of Directors at the Fall meeting 1970 for their approval.

Report of the Curator: Mr. Ganier discussed his private collection and renewed his invitation for individuals to study his bird skins and to avail themselves to back issues of the Migrant.

Report of the Nominating Committee: The Nominating Committee, consisting of Dr. Herndon, Mr. John Ellis, and Mrs. Edward Carpenter reported the nomination of Dr. James Tanner as President-Elect. Dr. Mayfield reappointed the Nominating Committee.

Committee on Self Study and Future Plans: The Chairman, Mr. Wallace Coffey, reported that two meetings had been held, one at the Fall symposium in Cleveland and on 8 May, 1970, at Reelfoot. He stated that most of the members had been able to attend both meetings. He turned the meeting over to Dr. Mayfield to lead a discussion of matters brought bfore the Committee.

Dr. Mayfield called on Mr. John Ellis who had visited the annual Kentucky Ornithological Society Meeting recently as the official representative of our Society. He stated that the KOS wanted to have a meeting jointly with the TOS on the week-end of 30 April, 1971 at Mammoth Cave, Kentucky. The Board of Directors voted favorably upon this proposal and directed Mr. Ellis and our Nashville Chapter to work with the KOS on the arrangements for this meeting.

A discussion of a Fall meeting for 1970, primarily for the presentation of scientific papers and for an additional meeting of the Board of Directors, followed. A motion to proceed with such a Fall meeting was made by Mr. Ganier and was passed. Wallace Coffey, Ken Dubke, and Dr. Mayfield agreed to act as a Committee on initial arrangements. Crossville, Tennessee was designated as the most likely site for this meeting.

Plans for a foray in June 1971 in the Mountains West of Oak Ridge were mentioned and Fred Alsop was designated as Chairman of this event.

There followed a discussion of the desirability and possible ways in which information on meetings and forays could be sent out to all members at an early date and this matter is still being explored by the Committee.

New Business: Dr. Mayfield reported that he had been informally attending meetings of the newly formed Tennessee Environmental Council. He briefly explained the purpose of this organization and the provisions of its constitution. He recommended that the TOS participate as one of the member organizations of this council and such action was voted and passed by the Board of Directors.

There was a general roll call of representatives of the various chapters, and each chapter presented a brief discussion of its membership and activities for the past year. The present status of the Kentucky Lake Chapter and the

Reelfoot Chapters was discussed briefly and these were to be further investigated prior to the Fall meeting. The new Murfreesboro Chapter represented by Mr. Larry McFarlin was particularly welcomed by the Board.

There being no further business, the meeting adjourned at 16:00.

Daniel Gray, Jr., *Secretary*

RESOLUTIONS

Whereas, the Tennessee Ornithological Society, assembled for its 55th annual meeting May 8, 9, and 10, 1970 at Reelfoot Lake, recognizes a debt of gratitude to those who unselfishly gave of themselves to contribute to the success of the meeting; therefore,

Be it resolved, That the Society here express its sincere appreciation to its host, the Memphis Chapter, and to

Mrs. Ed Carpenter, vice-president from West Tennessee, and her committee for planning and arranging the meeting, and to

The members from the Reelfoot area for the open house and the decorations: Mrs. Betty Surma, Mrs. John Lamb, Mrs. Cecilia Hudson, Mrs. William Moody, Mrs. Frank Markham, and to

Mr. Ralph Burrus, Superintendent of Reelfoot State Park, and Mrs. Ralph Burrus for their generous assistance, and to

Mrs. Arlo I. Smith, Chairman, Miss Mary Davant, and Mrs. Henry Dinkelspiel, committee for registration, and to

Mrs. Robert W. McGowan for art work, and to

Mrs. Ben B. Coffey, Jr. and Mr. Henry Dinkelspiel for arranging the display of pictures graciously loaned by Mrs. Thase Daniel, Dr. Carroll Turner, and Mr. Henry E. Parmer, and to

Mr. Ben B. Coffey, Jr., Chairman, Dr. and Mrs. Arlo I. Smith, Mr. Ken Leggett, and Mr. John DeLime, hike committee, and to Mr. and Mrs. Ben B. Coffey, Jr. for the Saturday night program.

Respectfully submitted, Kirby Stringer, Lois Herndon, Frances Abernathy.

THE 1970 SPRING FIELD DAYS

Counts were submitted from eleven locations across the state. Information on each of the individual counts, working from west to east across the state, will be found in the paragraphs below.

MEMPHIS—6 May 1970; Shelby Forest and, enroute, two parks, Lakeview, Miss.-Tenn.; weather fair. The Sora and bulk of the Dickcissels were in Mississippi.

Mr. ad Mrs. Ben B. Coffey (compilers).

REELFOOT LAKE—8, 9, 10 May 1970; Reelfoot Lake area, Obion Co. and Lake Co.

Ben B. Coffey (compiler).

SAVANNAH—Noon 7 May to noon 8 May; Olive Hill to Savannah to Pickwick Lake; Clear; little wind; temperature 60-80°. Four observers in one party.

David (compiler), Gloria, Mike and Paul Patterson.

COLUMBIA—1 and 2 May 1970; partly cloudy with rain showers; temperature 55-85°. Six observers.

Daniel Gray, Jr., George Mayfield, Jr. (compiler), Mark Mayfield, Rad Mayfield, Delton Porter, Paul Porter.

NASHVILLE—25 April 1970; from dawn to dark, but rain at noon actually resulted in a half day count; area about the same as the Christmas Count, plus Buena Vista Marsh, Bush Lake, and a small part of Old Hickory Lake. Nine parties with 35 observers.

Clyde and Vivian Anderson (compilers), Mr. and Mrs. Kenneth Bunting, Ruth Castles, Mrs. Charles L. Cornelius, Annella Creech, Milbrey Dugger, Roy Elliott, John and Evelyn Ellis, Erline Elmore, Clara Fentress, Albert Ganier, Katherine Goodpasture, Ben Groce, John and Martha Herbert, Mrs. A. B. Herron, Helen Hodgson, Louise Jackson, Mrs. J. C. Lorance, Harry Monk, Fanny Murphy, Anne Nichols, Henry Parmer, Mr. and Mrs. Oscar Patrick, John, Heather, and Natasha Riggins, Lawrence Trabue, George Woodring, Virginia Workman.

LEBANON—Noon 24 April to noon 25 April, 1970; moderate rains and overcast; temperatures 70-50-76°. Area covered the same as in previous years, Wilson Co. including homes, Boxwell Boy Scout Reservation, Old Hickory Game and Wildlife Experimental Feeding Station, Laguardo, Baird's Mill, Shop Springs, Gladeville, and Lebanon (cultivated fields—50%, deciduous woods and hills—30%, bottom land—5%, bogs and marsh—5%, yards and roadside—10%).

Rev. William Senter (compiler), Rev. Jim Martin, James Martin, Dr. and Mrs. R. D. Wilkinson, Dr. and Mrs. M. S. Howard, Mr. and Mrs. Clay Couch, Mr. and Mrs. Dixon Merritt, Mrs. Henry Waters, Mrs. Clyde Sellars, Dan Denny, Bill McCrary, Phillip Williams, Mrs. William Welty, Mr. Neil Welty, Dr. and Mrs. L. McFarland, Mrs. Sam Gilreath, Mrs. Alyne Eastes, Mrs. Glenn B. Burchett, Mrs. Frank Bloodworth, Mrs. George R. Bouton, Mrs. Carter M.

Farris, Mrs. Gould Smith, Mrs. Emmett Gaston, Mr. Willie Taylor, Mrs. Louise Chambers, Miss Mary Wharton, Bill Sellars, Mr. and Mrs. Byron S. Paul, Mr. Bob Mason, Dr. and Mrs. James Leathers, Dr. S. A. Berry, Mrs. Winstetad Bone, Jr., Mrs. William Bouton, Mrs. Ed Kass, Mrs. Roy Lawrence, Mrs. Ray Clark, Mrs. Gordon White, Mrs. Jess Crawford, Mr. and Mrs. Porter Taylor, Mr. and Mrs. Edward Turner, Mrs. William Smith.

COOKEVILLE—2 May 1970; 06:00 to 18:00. Areas included were within 15-mile diameter circle of the town. Yard and garden space, open country—field and woods, city lake area, were represented in the count. The day was cloudy; temperature 55-65°.

Miss Beulah Clark, Mr. C. H. Clark, Miss Jo Ann Clark, Mr. Roy T. Hinds, Dr. Paul L. Hollister, Mrs. Amy Johnson, Mrs. E. B. Knight, Mrs. Annice Moore, Mr. Ray Jordan, Mr. Miser R. Richmond, Mr. Roy H. Sullivan, Mrs. Thelma Tinnon, Mr. F. R. Toline, Miss Marie White (compiler).

CHATTANOOGA—3 May 1970; Parts of Christmas Count area plus other areas to the north on Chickamauga Lake. The day was completely overcast and dark with rain showers at intervals throughout the day. Temperature range, 52-60°.

Frances Barnwell, Jon DeVore, Roberta Doub, Mike Lilly, Mary Lou and Howard Meadors, Lillian Richards, Veta and Henry Sliger, Roger Swanson, Mary Tunsberg, Jack and Mark Wagner, Harvie B. Wilkinson, Gene West, Adele West (compiler).

KNOXVILLE—26 April 1970; selected areas from all of Knox County were included in the count, as in previous years. Rain fell most of the morning, cloudy and cool during afternoon; temperature 62-69°. Thirty observers. The Greater Scaup were seen by Fred Alsop, and James M. Campbell; the Barn Owl by Alsop; the Forster's Tern by J. C. Howell; and the Evening Grosbeak by John Elson.

J. B. Owen (compiler).

KINGSPORT—2 May 1970; same area covered as in 1969; 07:00 to 22:00; weather overcast; temperature warm.

Lillius Adams, Marie Brown, Tom Finucane (compiler), Bill Hincke, Martin King, Arthur Smith, Ann Switzer, Jonathan Wert.

ELIZABETHTON—2 May, 18:00, to 3 May, 18:00, 1970. Most of Carter County was included on the count, along with adjacent parts of Sullivan, Unicoi and Washington Counties, to include Boone, Patrick Henry, Watauga, and Wilbur Lakes, and Lake Phillip Nelson, Roane Mountain, and the Erwin National Fish Hatchery. The weather was clear to partly cloudy with rain during the afternoon of 3 May. Temperatures ranged from 58 to 68° F. during the count period.

Mr. and Mrs. Fred W. Behrend, Bill Bridgforth, Mr. and Mrs. J. C. Browning, Mrs. Kenneth Bryan, Mrs. Harold Dillenbeck, Mrs. George N. Dove, Glenn Eller, Mr. and Mrs. W. C. Hardin, Dr. and Mrs. Lee R. Herndon, Ralph Keffer, Ralph Kiser, Roby D. May, Dr. and Mrs. Milton Parker, Pete Range, Mrs. J. M. Sams, Charles R. Smith (compiler) Mr. and Mrs. Thomas Swindell, Bill Yambert.

ANNUAL SPRING FIELD DAYS, 1970

	Memphis	Reelfoot	Savannah	Columbia	Nashville	Lebanon	Cookeville	Chattanooga	Knoxville	Kingsport	Elizabethton
Common Loon	--	--	--	--	--	--	--	--	--	--	1
P.-Bl. Grebe	--	--	1	5	4	3	--	1	1	--	1
Gr. Blue Heron	--	10	1	--	--	8	--	1	--	--	--
Green Heron	--	7	3	5	21	3	1	5	7	6	21
L. Blue Heron	--	20	1	--	--	4	--	--	--	--	--
Common Egret	--	3	--	--	1	--	--	--	--	--	--
Snowy Egret	--	1	--	--	--	--	--	--	--	--	--
Cattle Egret	--	7	--	--	--	--	--	--	--	--	--
Bl.-cr. N. Heron	--	--	--	--	15	2	--	--	--	--	--
Yl.-cr. N. Heron	--	1	--	1	--	--	--	--	--	--	--
Least Bittern	--	--	--	--	--	--	--	2	--	--	--
American Bittern	--	--	--	--	--	--	--	1	1	1	--
Canada Goose	--	--	--	--	--	36	--	--	--	--	--
Mallard	5	10	1	5	3	100	--	--	12	9	1
Black Duck	--	--	--	--	--	2	--	--	--	--	--
Gadwall	--	--	--	2	--	--	--	--	--	--	1
Bl.-winged Teal	--	4	2	29	6	102	--	7	10	--	--
Shoveler	--	--	--	2	--	--	--	--	--	--	--
Wood Duck	3	32	1	2	11	56	--	7	8	5	19
Redhead	--	--	--	--	--	2	--	--	3	1	--
R.-necked Duck	--	--	--	--	--	--	--	--	15	--	--
Greater Scaup	--	--	--	--	--	--	--	18	10	--	--
Lesser Scaup	--	14	--	40	17	--	--	--	--	--	--
Common Goldeneye	--	--	--	--	3	--	--	--	--	--	1
Bufflehead	--	--	--	--	4	--	--	--	--	--	18
Hooded Merganser	--	--	--	--	--	2	--	--	--	--	--
Red-br. Merganser	--	--	2	--	--	--	--	--	--	--	7
Turkey Vulture	--	8	6	4	34	32	2	1	8	4	1
Black Vulture	--	5	--	4	13	5	--	--	--	2	--
Mississippi Kite	1	3	--	--	--	--	--	--	--	--	--
Cooper's Hawk	--	--	--	--	2	--	--	1	1	--	--
Rd.-tailed Hawk	--	1	2	5	4	3	--	2	1	1	2
Rd.-shld. Hawk	1	3	2	1	2	--	1	--	--	--	--
Br.-winged Hawk	--	1	2	2	8	--	--	2	7	2	4
Marsh Hawk	--	--	--	--	--	--	--	--	1	--	--
Osprey	--	--	--	--	2	--	--	--	6	2	2
Sparrow Hawk	--	1	--	8	13	11	--	1	4	1	1
Ruffed Grouse	--	--	--	--	--	--	--	--	--	2	--
Bobwhite	33	12	15	29	86	70	28	66	84	20	53
Turkey	2	6	--	--	--	--	--	--	--	--	2
King Rail	--	--	--	--	--	--	--	1	--	--	--
Virginia Rail	--	--	--	1	--	--	--	--	--	--	--
Sora	4	1	2	1	1	--	--	7	1	--	--
Purple Gallinule	--	--	--	--	--	--	--	1	--	--	--
American Coot	8	18	3	45	73	22	4	4	--	--	4
Semipal. Plover	--	14	--	--	--	--	--	--	--	--	--
Killdeer	5	20	3	8	24	14	4	16	28	4	11
Amer. Woodcock	--	--	1	2	2	4	1	1	--	--	--
Common Snipe	--	--	--	--	--	27	--	6	19	5	--
Spotted Sandpiper	--	12	1	5	1	--	1	9	13	6	23
Solitary Sandpiper	2	4	2	1	--	--	--	14	26	1	7
Willet	--	--	--	1	--	--	--	--	--	--	--
Greater Yellowlegs	--	--	--	--	--	--	--	--	23	1	5
Lesser Yellowlegs	--	--	4	--	1	--	--	23	3	3	14
Pectoral Sandpiper	1	2	--	--	--	--	--	--	--	--	--
Least Sandpiper	--	4	--	4	--	--	--	--	1	--	--
Herring Gull	--	--	--	--	--	--	--	--	1	--	--
Rng.-billed Gull	--	--	--	--	2	--	--	3	10	--	--
Bonapartes Gull	--	--	--	--	--	--	--	--	1	--	--
Forster's Tern	--	8	--	--	--	--	--	--	12	--	--
Common Tern	--	2	--	1	--	--	--	--	--	--	--
Black Tern	--	1	--	--	--	--	--	--	--	--	--
Mourning Dove	41	70	43	39	84	120	87	113	179	28	59
Yl.-billed Cuckoo	--	8	12	1	6	--	2	5	9	2	3
Bl.-billed Cuckoo	--	1	--	1	--	--	--	1	--	1	5

	Memphis	Reelfoot	Savannah	Columbia	Nashville	Lebanon	Cookeville	Chattanooga	Knoxville	Kingsport	Elizabethton
Barn Owl	--	--	--	1	--	--	--	--	1	--	--
Screech Owl	--	--	--	1	1	1	--	1	1	1	3
Gr. Horned Owl	--	--	--	1	--	2	--	--	1	--	--
Barred Owl	--	6	1	5	1	--	--	--	--	--	--
Chuck-wills-widow	3	--	3	2	2	2	3	--	7	--	1
Whip-poor-will	--	--	10	6	1	4	2	1	1	1	8
Common Nighthawk	2	20	2	2	1	3	1	--	4	5	4
Chimney Swift	8	50	21	45	288	83	39	60	247	23	249
R.-thr. Hummingbird	1	28	1	3	--	6	2	1	4	1	4
Belted Kingfisher	--	2	5	5	13	8	1	4	6	2	9
Yl.-sh. Flicker	8	12	3	5	33	10	16	27	47	11	56
Pileated Woodpecker	8	8	10	5	26	5	4	3	16	4	7
Red-bell. Woodpecker	13	30	13	21	56	16	14	9	29	5	3
Red-head. Woodpecker	6	11	--	3	10	1	9	5	7	2	--
Yl.-bell. Sapsucker	--	--	--	--	--	--	2	1	--	--	1
Hairy Woodpecker	4	5	2	4	10	2	4	--	4	--	3
Downy Woodpecker	5	24	5	20	46	16	5	7	25	3	19
Eastern Kingbird	40	32	17	28	22	23	14	7	40	2	13
Grt. Cr. Flycatcher	25	35	24	25	19	5	16	12	15	4	4
Eastern Phoebe	--	7	7	6	11	6	5	7	21	2	29
Acadian Flycatcher	18	18	10	6	8	--	1	--	4	5	4
Least Flycatcher	--	1	--	--	--	1	--	--	--	--	9
E. Wood Pewee	18	43	10	17	13	4	13	15	4	8	20
Ol.-sd. Flycatcher	--	--	--	--	--	--	--	1	--	--	--
Horned Lark	1	30	--	6	--	--	2	2	6	--	3
Tree Swallow	--	50	2	11	10	--	--	--	1	--	26
Bank Swallow	--	15	--	5	--	2	--	--	6	--	--
R.-winged Swallow	2	17	7	33	13	3	--	19	45	5	109
Barn Swallow	8	120	45	76	164	144	86	70	193	19	166
Cliff Swallow	--	1	60	--	39	8	--	115	4	--	3
Purple Martin	5	100	24	8	97	30	5	173	155	18	62
Blue Jay	22	24	41	38	276	241	73	125	276	52	127
Common Raven	--	--	--	--	--	--	--	--	--	--	4
Common Crow	5	60	14	49	68	105	52	57	187	26	106
Fish Crow	4	8	--	--	--	--	--	--	--	--	--
Carolina Chickadee	20	60	10	25	89	29	7	40	107	24	38
Tufted Titmouse	38	46	16	44	105	40	16	43	86	39	49
Wh.-br. Nuthatch	--	2	--	2	4	--	4	--	1	2	2
Rd.-br. Nuthatch	--	--	--	1	2	--	4	--	2	6	23
Brown Creeper	--	--	--	--	--	--	1	--	--	--	--
House Wren	--	--	--	--	--	--	4	1	8	2	16
Winter Wren	--	--	--	--	--	--	--	--	--	--	5
Bewicks Wren	--	--	4	1	4	1	--	--	3	--	--
Carolina Wren	58	60	15	13	36	7	22	31	101	7	31
L.-bl. Marsh Wren	--	4	--	--	--	--	--	--	--	--	--
S.-bl. Marsh Wren	--	--	--	--	--	1	--	1	--	--	--
Mockingbird	44	23	9	35	182	169	17	111	214	22	77
Catbird	10	16	8	11	25	13	28	22	17	5	95
Brown Thrasher	15	22	6	27	52	110	42	42	91	11	55
Robin	33	27	22	26	230	112	89	83	488	44	210
Wood Thrush	34	30	15	23	26	6	19	49	56	14	76
Swainson's Thrush	9	14	3	11	6	--	--	--	7	1	--
Gr.-cheeked Thrush	2	11	3	1	1	--	--	--	--	--	--
Veery	--	12	--	9	1	--	--	--	5	--	5
Eastern Bluebird	5	20	5	15	77	51	27	26	52	12	21
Bl.-gr. Gnatcatcher	28	90	20	56	69	3	--	5	34	10	8
R.-cr. Kinglet	--	3	--	--	2	1	--	1	13	2	1
Cedar Waxwing	2	2	--	--	--	4	1	38	78	--	1
Log.-hd. Shrike	3	16	3	16	16	7	5	3	--	--	3
Starling	160	96	30	72	385	507	131	751	797	62	433
White-ey. Vireo	24	56	34	14	70	--	8	4	29	10	15
Yl.-thr. Vireo	4	12	2	3	15	--	6	--	10	2	--
Solitary Vireo	--	--	--	--	--	--	--	--	--	--	5
Red-eyed Vireo	15	40	19	23	52	1	14	37	129	24	48
Phildelphia Vireo	--	1	1	--	--	--	--	--	--	--	--
Warbling Vireo	1	25	--	1	3	--	--	--	1	--	4
Bl. & W. Warbler	--	16	17	2	11	--	--	8	24	7	12
Prothonotary Warbler	18	40	16	8	28	2	--	--	2	--	--
Swainson's Warbler	1	5	--	--	--	--	--	--	--	--	--
Worm-eating Warbler	--	2	13	2	4	--	--	1	8	1	2

	Memphis	Reelfoot	Savannah	Columbia	Nashville	Lebanon	Cookeville	Chattanooga	Knoxville	Kingsport	Elizabethton
Gl.-winged Warbler	--	--	--	2	1	--	--	--	9	--	3
Bl.-winged Warbler	--	--	5	4	29	--	--	--	6	--	--
Tennessee Warbler	135	90	11	30	28	--	--	9	13	3	--
Nashville Warbler	--	10	1	1	3	1	--	--	4	--	--
Parula Warbler	9	40	--	4	6	--	--	--	2	4	3
Yellow Warbler	--	21	2	16	31	--	5	5	41	5	52
Magnolia Warbler	--	15	1	--	1	--	1	4	--	--	--
Cape May Warbler	--	3	--	1	--	--	--	6	5	1	15
Bl.-thr. B. Warbler	--	--	--	--	2	--	--	--	--	--	9
Myrtle Warbler	--	11	--	8	79	51	6	27	223	7	4
Bl.-thr. G. Warbler	3	12	4	4	1	--	--	--	26	2	2
Cerulean Warbler	14	13	8	10	6	--	--	--	16	2	--
Blackburnian Warbler	--	21	--	--	1	--	--	2	16	5	--
Yl.-thr. Warbler	4	10	--	3	9	--	2	--	2	7	--
Chest.-sid. Warbler	4	10	1	3	2	--	--	5	10	--	32
Bay-br. Warbler	--	10	1	5	2	--	--	1	1	--	5
Blackpoll Warbler	4	80	1	4	30	--	4	12	25	--	9
Pine Warbler	--	--	3	--	--	--	--	1	2	--	--
Prairie Warbler	--	1	8	11	37	9	--	6	33	3	3
Palm Warbler	--	2	--	10	28	20	--	2	17	--	--
Ovenbird	1	7	4	8	2	2	--	3	27	18	29
North. Waterthrush	4	7	--	3	--	2	--	--	--	--	4
La. Waterthrush	--	2	7	10	14	--	1	7	3	11	18
Kentucky Warbler	21	27	8	17	28	--	4	6	13	11	8
Connecticut Warbler	--	1	--	--	--	--	--	--	--	--	--
Mourning Warbler	--	1	--	--	--	--	--	--	--	--	--
Yellowthroat	24	72	43	18	48	11	9	29	69	6	43
Yel.-br. Chat	28	40	31	14	41	--	8	17	16	11	28
Hooded Warbler	7	3	3	2	14	--	--	4	5	9	8
Wilson's Warbler	--	3	2	--	--	--	--	--	--	--	--
Canada Warbler	--	--	1	--	1	--	--	1	2	1	3
American Redstart	33	36	4	3	4	--	--	1	6	4	2
House Sparrow	150	COM.	18	120	87	102	58	150	138	34	168
Bobolink	19	170	50	--	--	--	--	200	22	--	4
East. Meadowlark	61	88	18	106	277	201	128	104	322	40	144
Redwing. Blackbird	110	450	69	212	153	109	41	180	592	16	100
Orchard Oriole	51	38	12	30	66	17	4	7	29	3	8
Baltimore Oriole	27	53	1	4	22	2	2	3	2	1	7
Rusty Blackbird	--	--	--	--	4	20	2	--	--	--	--
Brewer's Blackbird	--	--	--	--	--	--	25	--	--	--	--
Common Grackle	140	150	49	445	778	519	152	303	1029	86	365
Br.-hd. Cowbird	66	200	24	65	94	77	42	43	185	13	56
Scarlet Tanager	3	6	8	8	29	2	1	11	17	9	11
Summer Tanager	33	25	14	19	54	27	15	19	28	5	6
Cardinal	145	90	52	46	265	276	78	136	407	68	167
Rose.-br. Grosbeak	1	23	1	6	16	--	3	20	28	3	33
Blue Grosbeak	--	--	9	2	8	1	2	4	6	--	--
Indigo Bunting	120	260	80	70	92	12	27	66	51	27	36
Dickcissel	612	170	116	30	2	--	1	--	--	--	3
Evening Grosbeak	--	--	--	--	15	--	--	2	1	--	25
Purple Finch	--	--	--	--	12	47	1	--	17	--	2
Pine Siskin	--	15	10	--	70	57	--	120	202	6	328
Amer. Goldfinch	6	53	10	18	396	148	75	8	130	27	161
Ru.-sided Towhee	19	4	22	41	120	66	30	61	208	40	134
Savannah Sparrow	1	2	8	6	2	6	4	4	11	--	--
Grasshopper Sparrow	4	--	14	21	--	--	--	--	5	--	3
Vesper Sparrow	--	--	--	--	2	--	--	--	--	--	--
Lark Sparrow	--	2	--	--	--	2	--	--	--	--	--
Sl.-col. Junco	--	--	--	--	--	--	2	--	--	1	22
Chipping Sparrow	1	5	7	14	71	8	9	15	43	7	53
Field Sparrow	1	30	13	43	93	49	11	50	119	15	39
Wh.-cr. Sparrow	2	12	3	4	--	28	--	--	42	4	17
Wh.-thr. Sparrow	5	5	3	41	135	17	9	19	198	27	30
Lincoln's Sparrow	--	2	1	2	1	--	--	1	--	--	--
Swamp Sparrow	--	3	2	--	8	4	--	4	3	--	1
Song Sparrow	--	1	--	--	--	--	7	37	119	21	100
TOTAL SPECIES (201)	91	142	115	131	133	98	86	116	141	103	127

ROUND TABLE NOTE

NORTHERN PHALAROPE IN THE GREAT SMOKY MOUNTAINS NATIONAL PARK.—On Wednesday, 20 August 1969, Park Naturalist Richard Zani and I turned off on the short gravel road which leads to the Cades Cove sewage lagoons. We had spent a rather uneventful morning looking at birds in Cades Cove and this was to be our final stop. It was 10:30 (EDT), the temperature was about 80°F, and the sun was shining to our backs through scattered clouds. Standing on a drainage pipe connecting the two lagoons was a Solitary Sandpiper (*Tringa solitaria*) and swimming on the upper (eastern-most) lagoon was a small, whitish, buoyant bird that could be nothing else but a phalarope. Since the bird was in winter plumage the initial problem was to ascertain which of the three species of phalaropes this individual represented.

We approached cautiously at first, but the bird proved quite confiding. It was quite easily approached and sometimes it swam to within twenty feet of us as we stood on the bank of the lagoon observing it. Both Dick and I used 7x35 binoculars. All field marks were called out and written down as we had only a copy of Peterson's *A Field Guide to the Birds* (1947) with us and wished to check other references later.

The following characteristics were noted: mandibles black and about the length of the head; crown, slaty-gray to blackish; nape, white with slate gray median stripe extending from crown to back; iris, very dark brown; black "phalarope-patch" through eye; rest of the head, the neck, and underparts white; upperparts and tail dark gray, most dorsal feathers margined with light edges producing whitish stripes on the back; wings, dark gray; legs and feet, blackish. There was a light streak of cinnamon wash extending down the left side of the neck from the posterior end of the eye mark. It was much smaller and very indistinct on the right side of the neck. Chapman (1939) marks this trace of rufous as an occasional characteristic seen on adult birds in the winter plumage.

By clapping my hands I was able to get the bird to raise and momentarily hold its wings over its back. In this position a white wing strip was clearly visible contrasted against the dark wing.

The bird was clearly a Northern Phalarope (*Phalaropus lobatus*). This constitutes the first record of this species for the Great Smoky Mountains National Park (Arthur Stupka, personal contract) and the third record for Tennessee.

I observed the bird on four different occassions during the day: the initial observation from 10:30-11:10 during which time the identification was made; from 14:00-14:30 when I made color photographs to confirm the identification; again from 15:30-16:05 in the company of Bill and Irene Williams using a 15-60x60 zoom spotting scope; and finally at 18:25.

On all occasions the bird's behavior was essentially the same. It was very tame and easily approached. It was always on the water where it gave an appearance of being very busy and purposeful. It swam lightly on the water, rather rapidly, and with frequent changes in course in a zigzag manner or in slow circles. It often pecked at the water's surface as it fed on aquatic organisms. The head was held high and carried with a nodding much like that of an American Coot (*Fulica americana*) as it swam.

Once the bird was observed bathing on the water. This consisted of water being tossed over the body by ducking the head or fluttering the wings between short periods of preening. And once when pressed too closely the bird flew about 8 feet only to settle lightly onto the lagoon once more. One other aspect of the phalarope's behavior is worthy of note. Two Common Crows (*Corvus brachyrhynchos*) flew over the area at a height of approximately 80 feet. As they approached the phalarope, which had been actively feeding, assumed a "crouching" position with the head and neck extended forward, low and parallel with the water. The bird remained motionless in this position for some seconds until the crows had passed over and flown on, after which it resumed its feeding.

During all observations the bird seemed normal and healthy.

The bird was not present on the lagoons the following day, nor was it seen thereafter.

How a Northern Phalarope could stray to the mountains of East Tennessee is a matter of speculation, but it is of interest to note that hurricane Camille hit the Gulf Coast on 17 August 1969 three days prior to the sighting.

Other members of the Knoxville Chapter T.O.S. that observed the bird on 20 August 1969 were: Mrs. E. E. Overton, Mr. and Mrs. James M. Campbell, Mr. and Mrs. Louis F. Smith, and Mr. and Mrs. J. B. Owen.

The Solitary Sandpiper seen with the phalarope on 20 August is the earliest fall record for the species in the Park. It beats the previous earliest date by three days (Stupka, 1963).

LITERATURE CITED

Chapman, F. M. 1939. Handbook of Birds of Eastern North America. 1966. Dover Publications, Inc., New York.

Peterson, R. T. 1934. A Field Guide to the Birds. Houghton Mifflin Co. Boston.

Stupka, A. 1963. Notes on the Birds of Great Smoky Mountains National Park. The Univevrsity of Tennessee Press.

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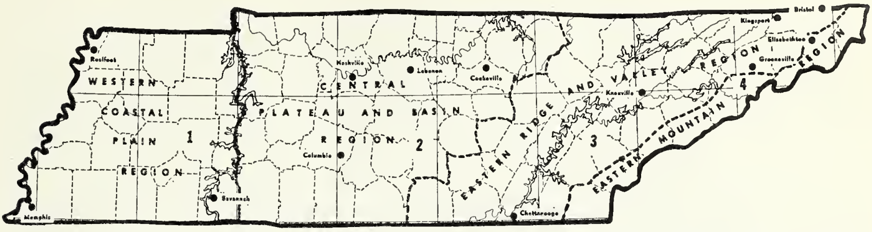
THE SEASON

Charles R. Smith, *Editor*



Data in the reports which follow are from the months of February, March, and April. The months of February and March continued the cold and dry trend established earlier in the winter. The mean departures from the normally expected monthly average temperatures for February and March for the state of Tennessee were —4.6° and —2.5°, respectively. Mean departures from the normally expected average monthly precipitation for February and March were —1.1 and —1.1, respectively. There were at least two periods of significant snowfall in February. These occurred on 3-5 February, with up to three inches accumulation in the eastern mountains, and 9-10 February, with up to ten inches accumulation in the mountains of northeastern Tennessee. The greatest period of rainfall occurred during 15-16 February, across the state. March experienced no significant snowfalls and little heavy rainfall.

The month of April was unusually stormy with heavy precipitation. This was the wettest April recorded by the Weather Bureau since 1964. Ten tornadoes occurred in the state with most of the storm activity during 19-27 April. Precipitation for April showed a mean departure of +3.4 inches from the expected normal precipitation average for that month for Tennessee. Temperatures were only slightly higher than usual for April, with a mean departure of +1.2° from the expected normal average temperature for the state.

The larger waterfowl are well represented by observations in the state for this report period. Among the more notable observations are the following: Whistling Swan from the Plateau and Basin Region, Mute Swan from the Ridge and Valley Region, Barnacle Goose from the Plateau and Basin Region, White-fronted Goose from both the Plateau and Basin and Ridge and Valley Regions. Among the raptors, reports of the Rough-legged Hawk from the Plateau and Basin Region and the Harlan's Hawk from the Ridge and Valley are of interest. The Laughing Gull near Nashville is also an interesting observation. Other noteworthy observations include Sandhill Crane from the Ridge and Valley, Catbird wintering at Elizabethton, Henslow's Sparrow from near Memphis, and Oregon Junco and Snow Bunting from the Plateau and Basin Region. Details of these and other observations may be found in the reports which follow.

WESTERN COASTAL PLAIN REGION—*Cormorant—Sparrow:* Double-crested Cormorant (1)* Blue-winged Teal (52)* Lesser Scaup (20)* Ruddy Duck (2,400)*. Bald Eagle (3, immature)* American Golden Plover (138)*. Greater Yellowlegs (2)*. Lesser Yellowlegs (16)*. Pectoral Sandpiper (127)*.

Water Pipit (4)*. Henslow's Sparrow: 1 Mar. (1) Dr. W. L. Whittemore, at his home, Memphis *fide* Ben and Lula Coffey, third Memphis area record. *all 5 Apr., Reelfoot Lake, Mike Bierly and Roger O. Harshaw.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Loons-Ducks:* Common Loon: 8, 10 Apr. (2) with (1) all Mar., LD (RTH). Horned Grebe: 4 Apr. (6) BL (JNR) and (4) RL (AT), 9 Apr. (1) RL (SB). Pied-billed Grebe: 21 Feb. (145) WR (ROH, MLB), last NA 25 Apr. (4) NA (NC). Great Blue Heron: 23 Mar. (42) DRU (JNR, MLB), scarce rest of area. Green Heron: 4 Apr. (1) BL (JNR), 11 Apr. (1) WB (MCW), 15 Apr. (1) LD (RTH). Common Egret: 30 Mar. (1) DRU (JNR, MLB) 14 Apr. (1) WB (FB), first Cannon Cty. record! American Bittern: 28 Mar. (1) WB (FB), 23, 24 Apr. (1) TJ (KAG, CEF). Whistling Swan: 10 Feb. (4) (Carl Barstow *fide* MLB) and 6 Mar. (4) (MLB, WmS) both HP. Canada Goose: 9 Feb. (175) WR (KHD), 14 Feb. (100) RL (AT), 28 Feb. (29) RL (MLB), 1 Mar. (250) BS (KAG, MG) all in flight, late were (5), to 24 Apr. DRU (GNB). Barnacle Goose: 1 Mar. thru 24 Apr. (1) DRU (GNB *et al.*) (see Round Table Note) White-fronted Goose: 9 Feb. (1) WR (KHD). Snow Goose 22 Mar. (1) ACM (ROH, MLB). Blue Goose 28 Feb. wintering imm. last seen BL (MLB). Mallard: 13 Feb. (75) HP (MLB, WmS), otherwise scarce. Black Duck: 2 Mar. (300) HP (MLB), last 22 Mar. (2) ACM (ROH, MLB). Gadwall: last 31 Mar. (1) RL (MLB). Pintail: 7 Mar. (1) HP (JHR), 23 Mar. (1) DRU (JNR, MLB)*. Green-winged Teal: 8 Mar. (12) HP (JHR), 27 Mar. (4) ACM (JHR), 30 Mar. (10) DRU (JHR). Blue-winged Teal: very early (1) 2 Mar. HP (MLB); 30, 31 Mar. (1) LD (RTH), 25 Apr. (6) BV (JHR). American Widgeon: 2 Mar. (300) HP (MLB), 7 Mar. (60) HP (JHR), 18 Apr. (6) RL (JHR) to (2) RL 21 Apr. (MLB). Shoveler: 14 Mar. (5) (MLB) thru 19 Apr. (14) (MLB, HCM), RL*. Wood Duck 3 Feb. to 30 Apr. (2-5) BT (RH), 2 Mar. (2) LD (RTH), 27 Feb. (2) RL (MLB), 8 Mar. (4) HP (JHR, MLB). Redhead: 21 Feb. (80) WR (MLB, ROH), 8 Mar. (6) HP (JHR), 27 Mar. (55) ACM (JHR), 4 Apr. (1) RL (AT), (2) BL (JNR). Ring-necked Duck: scarce in winter, then 2, 7 Mar. (300+) HP (JHR, MLB) 20 Mar. (99) RL (MLB), 11 Apr. (2) WR (HCM, MLB). Canvasback: scarce, 21 Feb. (7) WR (ROH, MLB), 28 Feb. (2) (JHR) to 20 Mar. (3) (MLB) RL. Lesser Scaup: scarce until 21 Feb. (227) WR (ROH, MLB), 28 Feb. (40) to 20 Mar. (227) then down to (3) 28 Apr.; all RL (JHR, AT, MLB). Common Goldeneye: 28 Feb. (30) RL (JHR, MLB) to 31 Mar. (2) RL (MLB, AT). Bufflehead: 21 Feb. (116) WR (ROH, MLB), RL with last, 25 Apr. (4) (MCW). Oldsquaw: 24 Mar. (1) (MLB), 4 Apr. (1) (AT), both RL. White-winged Scoter: 21 Feb. (1) WR (ROH, MLB), 25 Feb. (1) RL (MCW). Ruddy Duck: 23 Mar. (6) DRU (JNR, MLB), 28 Apr. (1) RL (AT). Hooded Merganser: 9 Feb. (80) WR (KHD), 8 Mar. (6) HP (JHR, MLB) 24 Mar. (4) (AT), 1 Apr. (2) (MLB) both RL. Red-breasted Merganser: 21 Mar. (100) DRU (MLB, ROH)*.

Vultures-Rails: Turkey Vulture: first report, 1 Mar. (6) Dickson Cty. (JHR) and (14) BS (KAG, MG), 22 Mar. migrating flock (80) WB (MCW). Sharp-shinned Hawk: to early Feb. (1) taking birds at H feeder BT (RH)*. Red-tailed Hawk: scarce over area. Broad-winged Hawk: 11 Apr.

(1) BS (KAG, MLB) and (3) RL (JHR), 28 Apr. (5) over H (JHR, MLB). Rough-legged Hawk: 9 Feb. (1) near Manchester (WmS)*. Golden Eagle: 27 Feb. (2), 7 Mar. (1), 24 Mar. (2) WB (MCW, FB). Bald Eagle: 9 Feb. (3) BT (DH), 23 Mar. (4) DRU (JNR, MLB. Marsh Hawk: 8 Mar. (1) HP (JHR), 25 Mar. (2) WR (MLB, JNR), 30 Mar. (1) DRU (JHR). Osprey: 19 Apr. (1) H (LOT), 20, 25 Apr. (1) LD (RTH), 24 Apr. (1), 25 Apr. (2) RL (MCW). Pigeon Hawk: 4, 5 Feb. (1) LB (WmS). Sandhill Crane: 4 Mar. (104) and (24) BT (RH), 11 Mar. (125) LD (RTH). Sora: 19, 25 Apr. (1) BV (JNR)*.

Sandpipers-Gulls: Woodcock: 24, 27 Feb. (1), 16, 18 Mar. (1) LD (RTH), 25 Apr. (2) FV (JOE). Common Snipe: 28 Feb. (8) WB (FB), 8 Mar. (1) HP (JHR), 9 Mar. (1), 3 Apr. (1) both, 21 Mar. (19) DRU (MLB, ROH), 15 Apr. (2), 18 Apr. (1) LD (RTH). Spotted Sandpiper: scarce, 19 Apr. (1) BL (JNR), 23, 25 Apr. (2) LD (RTH). Solitary Sandpiper: 1 Apr. (4) at 3 locations WB (FB), 19 Apr. (2) LD (RTH), 23 Apr. (1) SHV (KAG). Lesser Yellowlegs: 30 Mar. (2) DRU (JHR), 4, 19, 25 Apr. (1) BL (JNR)*. Pectoral Sandpiper: 25 March (20) WB (FB), 30 Mar. (26) DRU (JHR)*. Avocet: 30 Apr. (3) GSP (PC), gone daylight next day. No other reports to writer of shorebirds! Ring-billed Gull: continued below normal NA, 18 Feb. (100) OHL (LOT), last 25 Apr. (2) OHL (CK). Laughing Gull: 24 Apr. (1) 26 mi. So. Nashville (MLB). Bonaparte's Gull: 8 Apr. (1) RL (MLB), 11 Apr. (24) WR (HCM, MLB).

Cuckoos-Swallows: Yellow-billed Cuckoo: late, first report 25 Apr. (6) NA (NC). Great Horned Owl: 1 Mar. (1), 22 Apr. (1) H BT (RH)*. Barred Owl: 1 Mar. (1), Apr. (1) BT (DH). Whip-poor-will: 13 Apr. (1) H (MLB), 15 Apr. (2) BT (RH) and (1) LD (RTH). Common Nighthawk: 20 Apr. (1) BV (MLB) first report, none BT (RH). Chimney Swift: 31 Mar. (1) (MLB) to 6 Apr. (100) (LOT) both RL. Ruby-throated Hummingbird: early, 9 Apr. (1) WB (Kathleen Bratten *fide* MCW), 11 Apr. (1) CV (Caprice Haile), 19 Apr. (1) LD (RTH), 21 Apr. (2) OCR (AT). Red-headed Woodpecker: 1 Feb. (10) BT (RH), 21 Apr. (2) LH (JNR), 25 Apr. (10) A (NC). Yellow-bellied Sapsucker: last, 15 Apr. (1) LD (RTH), 24 Apr. (1) H (HCM). Eastern Kingbird: very early, 3 Apr. (1) RL (AT), then 20 Apr. (3) LD (RTH). Great Crested Flycatcher: 19 Apr. (1) LD (RTH), and (1) CP (HCM). Eastern Phoebe: returned to SHV 6 Mar. with (5) (KAG), late RL (2) 21 Mar. (AT). Acadian Flycatcher: 23 Apr. (1) banded TJ (KAG). Eastern Wood Pewee: 25 Apr. (1) WSM-TV (JHR). Horned Lark: 4 Apr. (6) BL (JHR)*. Tree Swallow: first, 29 Mar. (9) RL (JHR). Rough-winged Swallow: 26 Mar. (5) RL (LOT), few CL (MCW). Barn Swallow: well below normal NA (HEP), first, 23 Mar. (1) DRU (JNR, MLB), 27 Mar. (1) LD (RTH), 22 Mar. (1) RR, NA (MLB, ROH), 3 Apr. (1) WB (FB). Cliff Swallow: 29 Mar. (1) RL (JHR) was the first. Purple Martin: still fewer each year; 10 Mar. (1) WB (MCW), 22 Mar. (10) RL (JHR), 6 Apr. migrating flock (125) RL (MLB).

Nuthatches-Vireos: Red-Breasted Nuthatch: continued plentiful NA; last, 25 Apr. (1) BLV (HEP). Brown Creeper: last, 7 Apr. (1) H (AT). House Wren: 19 Apr. (1) H (Mrs. Clyde Anderson). Winter Wren: continued scarce; last, 9 Apr. (1) BS (MLB). Bewick's Wren: during Feb. (1-2) LD (RTH), 25 Apr. (5) NA (TOS count). Long-billed Marsh Wren: 26 Apr. (1) WSM-TV (JHR)*. Catbird: first, 17 Apr. (1) WB (FB), 18 Apr. (2) NA (JHR, AN), 20 Apr. (1) LD (RTH). Wood Thrush: first, 14 Apr. (1) H (AN), 17 Apr. (1) LD (RTH). Swainson's Thrush: first, 21 Apr. (1) OCR (AT) Gray-cheeked Thrush: 25 Apr. (1) RL (MCW)*. Blue-gray Gnatcatcher: very early 22 Mar. (1) H (SB), more normal 10 Apr. (1) WB (FB). Ruby-crowned Kinglet: last, 26 Apr. (1) WSM-TV (JHR). White-eyed Vireo: first, 9 Apr. (2) BS (MLB), 11 Apr. (1) LD (RTH). Yellow-throated Vireo: very early, 5 Apr. (1) dam CHL (MLB, ROH), 9 Apr. (1) BS (KAG). Solitary Vireo: 22 Apr. (2) WSM-TV, (1) LH, both (JHR). Red-eyed Vireo: 18 Apr. (4) RL (MLB, ROH). Warbling Vireo: 21 Apr. (1) WSM-TV (JHR).

Warblers: Black-and-white: late, first 9 Apr. (1) BS (KAG). Prothonotary: 7 Apr. (1) ACM (CK), 8 Apr. (3) RL (MLB). Worm-eating: 18 Apr. (1) RL (MLB, ROH). Blue-winged: 12 Apr. (2) H (AT). Tennessee: 20 Apr. (1) H (SB). Nashville: late, 27 Apr. (1) H (MLB). Parula: 9 Apr. (1) BS (KAG). Yellow: very early, 6 Apr. (1) RL (MCW), 13 Apr. (1) H WB (FB). Black-throated Green: 11 Apr. (1) Short Mt. (KAG), then none until 24 Apr. (2) LH (JHR). Cerulean: 18 Apr. (1) WB (FB) and (1) FR (AN). Blackburnian: 18 Apr. (1) CHL (SB). Yellow-throated: 10 Apr. (2) WB (FB), 11 Apr. (2) RL (JHR). Bay-breasted: first, 24 Apr. (1) WSM-TV (JNR). Blackpoll: 24 Apr. (1) LH (JNR). Pine: 19 Apr. (1) RL (MLB), 28 Apr. (3) CH (KAG). Prairie: 9 Apr. (1) BS (KAG), 15 Apr. (1) WB (FB). Palm. 19 Apr. (1) RL (MLB). Ovenbird: early, (1) 12 Apr. H (AT). Northern Waterthrush: 23 Apr. (1) banded TJ (KAG). Louisiana Waterthrush: 14 Mar. (1) RL (MLB). Kentucky: 12 Apr. (1) H (SB). Yellowthroat: 18 Apr. (1) LD (RTH). Yellow-breasted Chat: 19 Apr. (1) H WB (FB), 21 Apr. (1) OCR (AT). Hooded: 18 Apr. (1) FR (JHR *et. al*). Redstart: very early, 9 Apr. (2) BS (KAG).

Orioles-Siskins: Orchard Oriole: 13 Apr. (3) WB (FB), 18 Apr. (1) WSM-TV (MLB), 22 Apr. (2) LD (RTH). Baltimore Oriole: 20 Apr. (1) H FR (AN), then 24 Apr. (1) WSM-TV (JNR), 27 Apr. (4) LD (RTH). Rusty Blackbird: very late were (4) ACM 25 Apr. (AGF *et al*). Brown-headed Cowbird: first, 22 Feb. (100) OHL (JHR), then 22 Mar. (150) ONT (JHR) and (500) SHV (HCM, HEP). Scarlet Tanager: 18 Apr. (1) CHL (SB), 24 Apr. (1) H (JHR) and (2) LD (RTH). Summer Tanager: 17 Apr. (1) CW (MLB), 18 Apr. (1) H WB (FB), then 20 Apr. (4) LD (RTH). Rose-breasted Grosbeak: 18 Apr. (3) CHL (SB), 21 Apr. (2) OCR (AT), 23 Apr. (1) LD (RTH). Blue Grosbeak: 22 Apr. (1) H (ABH), 25 Apr. (8) NA (NC), 27 Apr. (1) LD (RTH). Indigo Bunting: very early was (1) 13 Apr. and (2) next day, LD (RTH), then 19 Apr. (1) H (ABH) and (2) WB (FB), 20 Apr. (1) WSM-TV (JNR). Dickcissel: 25 Apr. (2) near RL (MCW)*. Evening Grosbeak: 9 Feb. (12) SHV (LF), 28 Mar. (8) CH (NC), thru period (15) BT (RH) and to (15) during period SHV (KAG, MG, MLB, JHR). Purple Finch: numerous NA, last 29 Apr. (2) H (Dorothy Cushman *fide* AT). Pine Siskin: fairly numerous NA.

Sparrows: Savannah: 6 Mar. (1) HP (MLB) to 26 Apr. (3) SHV (KAG)* except NA. Vesper: 30 Mar. (40) DRU (JHR), 25 Mar. (7) WB

(FB), last, 25 Apr. (2) H (HH). Lark: 11 Apr. (1) Mt. Juliet (Joey Vaudrey)* Oregon Junco: (1) continued H (GRM) until 9 Mar., then 1 Mar. (1) H (ARL), and 11 Mar. (1) H (KAG). Tree: (1) H (RE) to 15 Mar., 3 Feb. (1) LB (WmS), few NA during Feb. Chipping: first, 7 Mar. (1) H (AT), 8 Mar. (1) WB (MCW), 13 Mar. (1) MBP (LOT). Fox: last, 30 Mar. (1) H (AT). Lincoln's: 25 Apr. (1) banded TJ (KAG). Swamp: last, 25 Apr. (3) BV (JHR). Song: late, 20 Apr. (1) RL (MLB). Snow Bunting: (1) last seen 18 Feb. dam OHL (Erline Elmore).

Locations: ACM—Ashland City Marsh, BL—Bush Lake, BLV—Bellevue, BS—Basin Springs, BT—Byrdstown, BV—Buena Vista Marsh, CH—Craggie Hope, CHL—Center Hill Lake, Sligo area, CL—Coleman's Lake, CP—Centennial Park, CV—Cookeville, CW—Cheekwood, DRU—Duck River Unit, Tenn. Nat'l Wildlife Refuge, FR—Franklin Road, GSP—Gallatin Steam Plant, HP—Hunters Point, upper OHL, H-home of observer, LB—Lebanon, LD—Lilydale, LH—Love Hill, MBP—Montgomery Bell Park, NA—Nashville Area, OHL—Old Hickory Lake, OCR—Otter Creek Road, ONT—Old Natchez Trace, RL— Radnor Lake, RR—River Road, NA, SHV—South Harpeth Valley, TJ—Two Jays Sanctuary, WB—Woodbury, WR—Woods Reservoir, WSM-TV—tower area (all reports from there are of uninjured birds).

Observers: SB—Sue Bell, MLB—Mike L. Bierly, FB—Frances Bryson, GNB —Gary N. Burke, NC—Nashville Chapter, T.O.S., PC—Paul Crawford, KHD—Kenneth H. Dubke, RE—Roy Elliott, CEF—Charles E. Farrell, LF—Louis Farrell Jr., MG—Mel Garland, AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, ROH—Roger O. Harshaw, RH—Robby Hassler, DH—Dave Hassler, HBH—Mrs. A. B. Herron, RTH—Roy T. Hinds, HH—Helen Hodgson, CK—Carol Knauth, ARL—Amelia R. Laskey, GRM—the George R. Millers, CM—Harry C. Monk, AN—Anne Nichols, HEP—Henry E. Parmer, JNR-JHR—John N. or John and Heather Riggins, WmS—William Senter, AT—Anne Tarbell, LOT—Lawrence O. Trabue, MCW—Mary C. Wood.

Note—the asterisk (*) is used to denote records printed which are the only ones for a species received by the writer.

Henry E. Parmer, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION—*Loons-Mergansers:* Common Loon: first, 10 Mar. (1) BWP (KD), max., 4 Apr. (25) NoL (JCH), last, 27 Apr. (2) WBL (KD, LS). Double-crested Cormorant: 27 Apr. (1) WBL (KD, LS). Common Egret: 7, 14 Feb. (1) PHL (GD, HD), 27 Apr. (2) SeV (LS). Yellow-crowned Night Heron: 26 Apr. (1) AM (KD), 27 Apr. (1) SeV (LS). Least Bittern: 26 Apr. (2) AM (KD). American Bittern: 5, 26 Apr. (1, 2) AM (KD). Mute Swan. 21 Feb. (1) BL (LRH, *et al*). White-fronted Goose: 7 Feb. (2) BL (LRH). Blue Goose: 17 Feb., 2 Mar. (1) HRA (KD). Greater Scaup: 10, 17 Feb., (214, 230) CL (KD), 13 Feb. (6) BL (LRH). White-winged Scoter: 7 Mar. (3) BL (GD, HD, RK, PR). Common Merganser: 11, 41, 18 Mar., 4 Apr. (3, 7, 7, 20) NoL (JCH). Red-breasted Merganser: 24 Mar., 7 Apr. (4, 17) NL, CL (KD), 18 Apr. (1) NoL (JCH).

Hawks-Gulls: Cooper's Hawk: 6 Feb. (1) DL (LS). Harlan's Hawk: 19 Mar. (1) AM (JD) (See *The Migrant* 40: 85-86). Red-shouldered Hawk: 5

Apr. (1) K (FA, JCH). Bald Eagle: 13, 15, 20 Feb. (1 adult) HRA (KD), 7, 11, 13 Mar. (2 [adult and imm.], 1, 1) NoL (JCH). Marsh Hawk: regular through period to 8 Apr. (1-2) HRA (KD, LS). Osprey: first, 31 Mar. (2) HRA (KD), last week in April (2 nests, one egg and two eggs) WBL (KD). Sandhill Crane: 2 Mar. (50) HRA (AA). Virginia Rail: 26 Apr. (1) MB (KD, FW). American Woodcock: 28 Feb. (1) JC (GD, HD), 17 Apr. (1) K (FA). Greater Yellowlegs: first, 31 Mar. (1) K (BL), 31 Mar. (2) HRA (KD). Lesser Yellowlegs: first, 31 Mar. (1) K (BL). Pectoral Sandpiper: first, 30 Mar. (1) K (BL). Least Sandpiper: 28 Apr. (1) K (FA, JMC, GW). Dunlin: max., 31 Mar. (61) SB (KD), last, 7 Apr. (13) SB (KD). Bonaparte's Gull: 26 Mar. (1) NoL (JCH), 13 Apr. (37) NL (KD).

Owls-Crossbills: Barn Owl: regular through period (1) HRA (KD), 1 Feb., 3, 8 Mar. (1) JC (PR), 19 Mar. (1) K (FA, JMC) caught in kite string on tree, 18 Apr. (1) NoL (JCH). Barred Owl: 18 Apr. (1) NoL (JCH). Rough-winged swallow: first, 19 Mar. (2) HRA (KD), unusually early. Barn Swallow: first, 24 Mar. (2) NL (KD), unusually early. Bewick's Wren: 5 Apr. (1) K (FA, JMC). Solitary Vireo: 28 Mar. (2) K (JMC), unusually early. Orange-crowned Warbler: 16 Apr. (4) K (FA, GW), 18, 19 Apr. (2, 1) K (JMC). Yellow-throated Warbler: 29 Mar. (1) K (JMC), unusually early. Black-throated Blue Warbler: 21, 23 Apr. (1, 1) K (FA, JMC). Bay-breasted Warbler: 23 Apr. (1) K (FA, JMC), unusually early. Dickcissel: 27 Apr. (1) SeV (LS). Evening Grosbeak: regular to 10 Apr. (1 to 20) SeV (LS), 21 Mar. (10) K (JC). Red Crossbill: 23 Feb., 7, 16 Mar., 21 Apr. (7, 1, 6, 1) JC (HD, PR), 5 Apr. (2) K (FA, JMC), 17 Apr. (2) K (FA, GW).

Locations: AM—Amnicola Marsh, BL—Boone Lake, BWP—Booker T. Washington State Park, CL—Chickamauga Lake, DL—Dunlap, JC—Johnson City, K—Knoxville, MB—Moccasin Bend, NL—Nickajack Lake, NoL, PHL—Patrick Henry Lake SB—Savannah Bay, SeV—Sequatchie Valley, WBL—Watts Bar Lake.

Observers: AA—Arnold Aslinger, FA—Fred Alsop, JMC—James M. Campbell, JC—James Cooley, GD—Mrs. Geo. Dove, HD—Mrs. Harold Dillenbeck, JD—Jon DeVore, KD—Kenneth H. Dubke, JCH—Joseph C. Howell, LRH—Lee R. Herndon, RK—Ralph Keffer, BL—Beth Lacy, PR—Peter Range, LS—Lee Shafer, FW—Frank Ward, GW—Gary Wallace.

James M. Campbell, 15 Hedgewood Drive, Knoxville 37918.

EASTERN MOUNTAIN REGION—*Heron-Eagle:* Great Blue Heron: 15 Feb. (2) RC (PR). Canada Goose: 15 Feb. (12) RC (PR). Black Duck: 15 Feb. (15) RC (PR). Gadwall: 15 Feb. (1) RC (PR), 14 Mar. (8) WiL (FWB). Pintail: 15 Feb. (1) WaL (PR). American Widgeon: 14 Mar. (1) WiL (FWB). Shoveler: 15 Feb. (1) RC (PR). Wood Duck: throughout period in small numbers (2-5). Redhead: 1 Feb. (1) WiL (FWB). Ring-necked Duck: 1 Feb. (30) WiL (FWB). Canvasback: 15 Feb. (7) RC (PR). Lesser Scaup: throughout period (2) WiL. Common Goldeneye: 1 Feb. (2) WiL (LRH). Bufflehead: 1 Feb. (80) WiL (FWB). Hooded Merganser: 20 Mar. (1) WiL (FWB), 7 Apr. (2) WaR (FWB). Sharp-shinned Hawk: 5 Apr. (1) MC (CRS). Red-tailed Hawk: throughout period (1-7) HC (MS).

Red-shouldered Hawk: 1 Feb. (1) CC (FA, JCH), 5 Apr. (1) LR (FA, JCH). Golden Eagle: 1 Feb. (1) CC (FA, JA, DH).

Coot-Thrasher: American Coot: 14 Mar. (1) WiL (FWB. American Woodcock: 24 Feb. (1, singing) WaR (FWB). Common Snipe: 1 Mar. (1) MC (CRS). Herring Gull: 15 Feb. (1) RC (PR). Ring-billed Gull: 15 Feb. (3) RC (PR). Barred Owl: 4, 18 Apr. (1) RM (FWB), 24 Apr. (1) UM (CRS). Chuck-will's-widow: first, 20 Apr. (1) MC (CRS). Whip-poor-will: first, 24 April (6) UM (CRS). Purple Martin: first, 3 Mar. (1) EGC (LRH). Red-breasted Nuthatch: "abundant" throughout period RM (FWB). Catbird: (1) wintering E (LRH, *et al*). Brown Thrasher: (1) wintering E (LRH, *et al.*)

Vireo-Sparrow: Solitary Vireo: 27 Mar. (1) RM (FWB), very early. Cape May Warbler: 23 Apr. (3) WiL (CRS), early. Cerulean Warbler: 25 Apr. (1) UM (CRS), early. Yellow-throated Warbler: 23 Apr. (1) WiL (CRS). Louisiana Waterthrush: 25 Mar. (1) RM (FWB), early. Evening Grosbeak: until end of Apr. E. Pine Siskin: throughout period (75-100) RM (FWB). Red Crossbill: 1 Feb. (50) RM (FWB), 15 Feb. (20) WaL (PR), 20 Feb. (12) RM (FWB). White-winged Crossbill: 1 Feb. (100) RM (FWB), 20 Feb. (12) RM) (FWB), 6 Mar.-21 Apr. (6-7) RM (FWB). Vesper Sparrow: 15 Mar. (1) UT (FA, JC), 4 Apr. (3) CC (FA, JC), 24 Apr. (1) GRS (FA, JC).

Locations: CC—Cades Cove, E—Elizabethton, EGC—Elizabethton Golf Course, GRS—Greenbrier Ranger Station GSMNP, HC—Heaton Creek, near RM, LR—Lovell Rd., I40, Knox Co., MC—Milligan College, RC—Roan Creek area of WaL, RM—Roan Mtn., UM—Unaka Mtn., UT—UT Plant Science Farm, WaL—Watauga Lake, WaR—Watauga River, WiL—Wilbur Lake.

Observers: FA—Fred Alsop III, JA—Jean Alsop, FWB—Fred W. Behrend, JC—Jim Campbell, LRH—Lee R. Herndon, JCH—J. C. Howell, DH—Dennis Huffman, PR—Pete Range, CRS—Charles R. Smith.

Brent Rowell, 2227 Edgemont Ave., Bristol 37620.

ANNOUNCEMENT OF A FALL MEETING

TENNESSEE ORNITHOLOGICAL SOCIETY

OF THE

9-11 OCTOBER 1970

HOLIDAY HILLS RESORT, CROSSVILLE, TENNESSEE

Schedule of Events, Saturday, 10 October 1970

11:00-12:00	Meeting of the Committee for Self-study and Future Plans
12:00-13:00	Lunch, on your own
13:00-14:00	Meeting of the Board of Directors
14:00	Informal Paper Session Begins
Evening	"The Role of the TOS in the Tennessee Environmental Council," by George R. Mayfield, Jr.

There will be informal field trips both Saturday and Sunday mornings for those who may be interested in participating. Those planning to attend this meeting should make their own reservations directly with the Holiday Hills Resort, Drawer 608, Crossville, Tennessee 38555, as soon as possible before 15 September 1970, and state that they are with the TOS meeting. This is especially important since we have until 15 September to fill up the resort, after which they will begin accepting other reservations. A $10.00 deposit should accompany your request for a reservation. For those who decide to attend at the last minute, there are numerous other motels and resorts in the area as well as camping at nearby Cumberland Mountain State Park. For further information, contact Kenneth H. Dubke, 3302 Navajo Drive, Chattanooga, Tennessee 37411.

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, specific, and descriptive.

STYLE: Recent issues of THE MIGRANT should be used as a guide in the preparation of manuscripts. Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N. W., Washington, D. C. 20016.

COPY: Manuscripts should be typed double spaced on 8½ x 11" paper with adequate margins, for editorial notations, and should contain only entries intended for setting in type, except the serial page number. Tabular data should be entered on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper in black and white (not in color). Instructions to the editors should be given on a separate sheet. Weights and measurements should be in metric units. Dating should be in "continental" form (e.g., 7 March 1968).

NOMENCLATURE: Common names should be capitalized followed by binomial scientific name in italics only after the first occurrence in the text for both regular articles and ROUND TABLE NOTES, and should conform to the A.O.U. Check-list 5th edition, 1957. Trinomial should be used only after the specimen has been measured or compared with typical specimens.

BIBLIOGRAPHY: When there are more than five references in an article, they should be placed at the end of the article, otherwise they should be appropriately included in the text.

SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

REPRINTS: Reprints are available on request. Reprint requests should accompany article at the time of submission. Billing to authors will be through the state T.O.S. Treasurer.

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BIRDS

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A CENSUS OF A BREEDING BIRD POPULATION IN A VIRGIN SPRUCE FIR FOREST ON MT. GUYOT, GREAT SMOKY MOUNTAINS NATIONAL PARK

By Fred J. Alsop, III

Introduction

There is no true timberline in the Southern Appalachians. The spruce-fir forests that crowned the crests of this chain of mountains bisecting much of the eastern United States have been reduced to a remnant by the activities of man. More than ninety percent of the virgin spruce stands of these mountains have been lost due to lumbering and fires (Stupka, 1963). The unspoiled Canadian Zone forests of Mt. Guyot and the other high mountains within the boundaries of the Great Smoky Mountains National Park are unique in eastern North America, both their fauna and flora. Not every species of bird found in the boreal spruce-fir forests of northern Maine and western Ontario are to be found there. Indeed, many characteristics of the forests of the north are rare in the spruce-fir of these southern highlands, but enough boreal species inhabit the biome to make it the only clearly-defined "life zone" in these mountains. In these high-altitude forests many Canadian Zone birds nest in the southernmost extension of their breeding range in the Eastern United States.

The Balsam Wooly Aphid (*Chermes picea*) was accidentally introduced from Europe into New England in 1908. It has since spread to eastern Canada, the Pacific Northwest, and to the Southern Appalachians. In 1957 it was discovered in North Carolina, and in 1963 on Mt. Sterling in the Great Smoky Mountains National Park.

Because of its exceedingly high reproductive capacity and the absence of natural predators the aphid represents a very serious threat to many species of fir trees in this country. A heavy stem infestation can kill a tree within two years (United States Departments of Agriculture and Interior, 1964). In the Great Smoky Mountains National Park, Fraser Fir (*Abies fraseri*) forms almost pure stands above 6,000 feet altitude. Should this species be destroyed, the vegetation of these mountain highlands would undergo dramatic changes which would soon be followed by equally intense changes in the kinds of animals living in this biome.

PURPOSE OF THE STUDY

The uprpose of this study was to determine as accurately as possible the density of the bird populations in a virgin spruce-fir forest before changes in the forest resulting from aphid damage could occur. Accounts of the kinds of birds to be found in the spruce-fir biome are numerous. Some taken in the Southern Appalachians date almost one hundred years ago (Brewster, 1886). These reports give excellent records of the numbers of species to be found, but none gives the numbers of individuals of each species, the density, to be expected for a given unit of measure of spruce-fir forest.

A knowledge of the approximate avian population is of importance for several reasons: 1) As far as can be determined from the literature search, there are no records of population censuses taken in a virgin spruce-fir forest. The study is, therefore, unique. 2) Should the aphid continue to spread unchecked, there will occur many changes in the flora and fauna of the area. 3) Records of the present population densities are needed as a basis for comparison for ecological studies which might be undertaken at some future date.

THE AREA

The area chosen for study was a sample plot established in the spruce-fir forest on Mt. Guyot in Great Smoky Mountains National Park. Mt. Guyot is the second highest mountain in the Park and the third highest point in the Eastern United States, reaching an altitude of 6,621 feet above sea level at 35°43' N., 83°16' W. (USGS map NI 17-1). It is located on the boundary of Haywood County, North Carolina and Sevier County in East Tennessee. The mountain is accessible by United States Highway 441 and by Tennessee Highways 32 and 73. Only foot trails enter the mountain itself. A base camp from which the census was conducted was established at Tricorner Knob, a permanent shelter on the Appalachian Trail.

The study plot was a sixty-acre L-shaped grid divided into forty squares 256 feet on a side, each square having an area of one and one-half acres. Elevation of the plot varied from 5,760 to 6,000 feet. The climate at this elevation is similar to that found farther to the north. The average annual precipitation is about 38 inches. The average temperature in January is equivalent to that in Central Ohio while the average July temperature is duplicated along the southern edge of Hudson Bay in Canada (U.S. Dept. of Commerce, Weather Bureau, 1962). During the period of the census, 17 June, 1967, to 27 June, 1967, the average daily noon temperature at Tricorner Knob was 58°F.

The dominant plant association is the spruce-fir forest of the Canadian Zone biome. Because of their remoteness from easily accessible areas, the forests of Mt. Guyot were not logged before the national park was established. The forests that exist on the mountain at present are magnificent virgin remnants of those that once extended northward from the Southern Appalachians into Canada.

There was no edge or ecotone in the study area. The forest surrounding the grid was the same for miles in all directions being broken only by an occasional windfall. The uniformity of the area is an important factor. Uniform habitats typical of large regions are particularly desirable and at least one-half the value of each count depends upon it (Hall, 1964).

A survey of the forest crown vegetation on the census area was made. Its composition was found to be as follows: Fraser Fir 80%, Red Spruce (*Picea rubens*) 16%, and Yellow Birch (*Betula lutea*) 4%. (For a complete description of vegetation see Alsop, 1968.) Due to the shallowness of their root systems many trees are blown over during periods of strong winds leaving a mass of roots, soil, and matted vegetation standing almost vertically at the butt of the trunk. At least two species of birds, the Winter Wren (*Troglodytes troglodytes*) and the Slate-colored Junco (*Junco hymenalis*), were found to use these upturned tangled masses for nesting sites.

THE STUDY

Because many birds pass through the Great Smokies in the course of their spring migration, the end of the second week of June was chosen as a favorable time to begin the census. At this time no migrants are likely to be found in the spruce-fir forests and most of the passerine birds in residence in these high elevations are involved in some phase of their nesting activities during this period.

In order to minimize error in the conversion of the numbers of territorial males on the plot to a basis of the number of males per hundred acres the plot was made as large as possible. It was felt that sixty acres could be covered by the observer in one census trip before the birds' activity began to decline. Coverage of an area this large by a single observer was possible largely due to the restriction of the environment to a single uniform type and to the persistance of the birds' activity during most of the day at this altitude.

When the grid was established, with the recording stations at the intersections of the grid lines, a map was made of it for each species recorded on or over the study area (for a more detailed description of the methods and materials used see Alsop, 1968). These were used to plot the location of each contact and to establishing the number of territorial males using the area.

At each station, as soon as the time and station number were recorded, birds were counted by sight and sound for three minutes. During this time all the birds contacted were recorded. This was done even though the population density would be based on males only, to gain a knowledge of all the birds that occurred on the census area regardless of their status. No contacts made while moving from one station to the next were recorded.

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Contacts were scored in three ways using the symbols *se* for seen, *si* for heard singing, and *h* for heard calling only. This procedure was used because it was felt by the observer that a singing bird was probably a male advertising his territory and was therefore more important, from the standpoint of the census results, than a bird detected only by his call notes. In the same manner a bird scored as singing was given priority over one actually seen. The type of contact was followed with an estimate of the distance, in feet, from the observer to the bird. The bird's direction in relation to that of the observer was plotted using a compass.

A special effort was made to record the locations of males of the same species singing simultaneously. This information was much more helpful than clusters of records of singing observations from a series of days because the birds were known to be two different individuals, a fact that enabled me to draw a territorial line between them on a map. During each count special notations were made of birds that flew over the area such as Chimney Swifts (*Chaetura pelagica*), Broad-winged Hawks (*Buteo platypterus*), and Ravens (*Corvus corax*). Noted also were the locations of immature birds and birds whose actions indicated a nest might be close by. In all, nine counts were made during the morning hours and six in the afternoon for a total of fifteen.

TABLE 1

THE POPULATION DENSITY OF MID-JUNE BREEDING BIRDS OF THE MT. GUYOT SPRUCE-FIR FOREST

Species	Number of males per 60 acres	Number of males per 100 acres
Slate-colored Junco (Junco hyemalis)	46	76
Golden-crowned Kinglet (Regulus satrapa)	30	50
Winter Wren (Troglodytes troglodytes)	20	33
Veery (Hylocichla fuscescens)	20	33
Black-throated Blue Warbler (Dendroica caerulescens)	14	23
Solitary Vireo (Vireo solitarius)	9	15
Black-throated Green Warbler (Dendroica virens)	7	11+
Brown Creeper (Certhia familiaris)	6	10
Red-breasted Nuthatch (Sitta canadensis)	5	8
Robin (Turdus migratorius)	5	8
Black-capped Chickadee (Parus atricapillus)	4	6+
Hairy Woodpecker (Dendrocopos villosus)	2	3
Blackburnian Warbler (Dendroica fusca)	2	3
Totals	170	281

TABLE 2

A COMPARISON OF THE NUMBERS OF MALE BIRDS PER HUNDRED ACRES ON MT. GUYOT AND MT. MITCHELL

Species	Plot Census Mt. Guyot Alsop, 1967	Strip Census Mt. Mitchell Alsop, 1967	Plot Census Mt. Mitchell Adams, 1959
Slate-colored Junco (*Junco hyemalis*)	76	24	65
Golden-crowned Kinglet (*Regulus satrapa*)	50	13	50
Winter Wren (*Troglodytes troglodytes*)	33	22	35
Veery (*Hylocichla fuscescens*)	33	12	+
Black-throated Blue Warbler (*D. caerulescens*)	23	0	0
Solitary Vireo (*Vireo solitarius*)	15	3	40
Black-throated Green Warbler (*Dendroica virens*)	11+	3	75
Brown Creeper (*Certhia familiaris*)	10	0	+
Red-breasted Nuthatch (*Sitta canadensis*)	8	1+	20
Robin (*Turdus migratorius*)	8	4	15
Black-capped Chickadee (*Parus atricapillus*)	6+	0	0
Hairy Woodpecker (*Dendrocopos villosus*)	3	0	+
Blackburnian Warbler (*Dendroica fusca*)	3	0	35
Song Sparrow (*Melospiza melodia*)	0	6	0
Chestnut-sided Warbler (*Dendroica pensylvanica*)	0	8	0
Canada Warbler (*Wilsonia canadensis*)	0	1+	1
Catbird (*Dumetella carolinensis*)	0	1+	0
Totals	281	98+	340

This method of plotting the birds contacted on maps to determine the number of territorial males present, the Williams spot-mapping method, is very well adapted for most species of small passerine birds. The method is not used to determine the territorial boundaries, but to determine the number of territories present.

Twenty-four species of birds were found on or flying over the Mt. Guyot study plot. Of these twenty-four, thirteen were thought to be breeding birds or territory holders at the time of the census. These thirteen species were represented by one hundred-seventy territorial males, an average of 2.8 territorial males per acre (Table 1).

A trip was made to Mt. Mitchell in North Carolina to see the effects of the Balsam Wooly Aphid and to conduct a brief census of a bird population in a disturbed habitat for comparison with the Mt. Guyot study. It can be assumed from the close proximity of Mt. Guyot to Mt. Mitchell (they are about fifty-five statute miles apart and of similar elevations) that the forests and the birds found on both were originally identical. This can be further substantiated by the records of early naturalists such as Brewster (1886). Today they are quite different. The forests on Guyot are in their primitive condition; those of Mt. Mitchell have been logged, burned, infested, and left to the ravages of the winds except for some Fraser Fir at the very summit which now face the threat of the aphid. Adams (1959) conducted a breeding bird census on Mt. Mitchell.

On 1 and 2 July, 1967, I conducted two strip censuses to get an index of the relative abundance of the breeding birds there. I was looking for the absence of species recorded on Mt. Guyot and the occurrence of any birds that had not been observed there whose presence could be tied to the ecological changes in the vegetation on Mt. Mitchell. The result of these counts and a comparison with those of Adams' on Mitchell and mine on Guyot are shown in Table 2.

The most dramatic differences in the avifauna were the absences of the Black-throated Blue Warbler (*Dendroica caerulescens*), Brown Creeper (*Certhia familiaris*), and Black-capped Chickadee (*Parus atricapillus*) on Mt. Mitchell as these were common in the spruce-fir of Mt. Guyot. Similarly, the Song Sparrow (*Melospiza melodia*) and the Chestnut-sided Warbler (*Dendroica pensylvanica*) were plentiful on Mt. Mitchell, but the Song Sparrow was never recorded on Mt. Guyot and only one Chestnut-sided Warbler was a visitor to the study plot.

The strip censuses taken on Mt. Mitchell also indicate decreases in the populations of Solitary Vireos (*Vireo solitarius*), Black-throated Green Warblers (*Dendroica virens*), Red-breasted Nuthatches (*Sitta canadensis*), Robins (*Turdus migratorius*), and Blackburnian Warblers (*Dendroica fusca*). Possibly the bird that has benefited the most by the changes in Mt. Mitchell's vegetation is the Song Sparrow. This seems to be a "disaster" species in the higher elevations of the Southern Appalachians. It extends its range to the very peaks of these mountains when sufficient damage has been done to the vegetation to establish the open second-growth areas it prefers.

Summary

The introduction of the European Balsam Wooly Aphid into the United States poses a threat to the Fraser Fir of this country. A census was conducted in the virgin spruce-fir forests of Mt. Guyot in the Great Smoky Mountains National Park using a spot-mapping method to determine the absolute breeding bird population on a sixty-acre plot before ecological changes were brought about by aphid destruction. The results of this census were compared to findings of other investigators in similar biomes. A trip was made to, and a strip census was conducted on, Mt. Mitchell where the forests have undergone dramatic changes due to the destruction of the trees by man and aphid infestation. The findings on Mt. Mitchell were compared to those of Mt. Guyot to see if any changes in the avifauna could be linked directly to the aphid.

This research was important not only in providing a basis for comparison by future investigators, but also in that censuses in undisturbed spruce-forests are few in general and unique in the Southern Appalachians.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Dr. James T. Tanner, my major professor, for his continued aid and suggestions before, during, and after the period of research which helped to make this work possible. I am further grateful to him and Dr. J. C. Howell and Dr. D. A. Etnier, members of my review committee, who gave of their time in evaluating the original manuscript.

LITERATURE CITED

Alsop, Fred J. III. 1968. *A Census of a Breeding Bird Population in a Virgin Spruce Fir Forest on Mt. Guyot, Great Smoky Mountains National Park.* Unpublished Masters Thesis. Dept. of Zoology and Entomology, University of Tennessee, Knoxville.

Adams, D. A. 1959. Fraser's Fir Forest, Breeding Bird Census. *Audubon Field Notes.* 13(6):464.

Brewster, W. 1886. An Ornithological Reconnaissance in Western North Carolina. *Auk* 3:94-112, 173-179.

Hall, G. A. 1964. Breeding-bird Censuses—Why and How. *Audubon Field Notes* 18(3):416.

Stupka, A. 1963. *Notes on the Birds of Great Smoky Mountains National Park.* The Univ. of Tenn. Press.

U. S. Department of Commerce, Weather Bureau. 1962. Climatology of the United States. No. 20-40.

U. S. Departments of Agriculture and Interior, 1964. Balsam Wooly Aphid Attacks Fraser Fir in Appalachians, Atlanta, Ga.

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A 1969 SPOT-COUNT OF SUMMER BIRDS OF SHELBY COUNTY

By Ben B. Coffey, Jr.

Many early summer field trips have been made in the Mid-South, generally at some distance from Memphis, during the last two decades. Last June, I decided to renew acquaintance with Shelby County. From 8 June through 6 July, 1969, I was out for parts of fifteen mornings (with Mrs. Coffey on four) for a total of 46 hours of roadside observations including travel time between the frequent stops made. Representative areas throughout the county were worked. Except for short periods in Overton and Riverside Parks, no observations were made in Memphis (including Whitehaven) or the larger towns.

In arranging the total count, which follows, I decided it would be of more interest to list the eighty species in numerical order, the numbers being both relative and tentative. The House Sparrow, for which no count was made, was ranked arbitrarily. Counts for the Rough-winged Swallow include a flock of 32 and for the Turkey, 12 immatures with the 3 adults, placing them higher in the ranking than deserved. Further discussion follows the list.

Common Grackle, 680; Mockingbird, 539; Cardinal, 508; Bobwhite, 431; Indigo Bunting, 424; Eastern Meadowlark, 424; Starling, 353; Robin, 293; Blue Jay, 280; Red-winged Blackbird, 254; House Sparrow, common; Yellowthroat, 227; Carolina Wren, 204; Rufous-sided Towhee, 155; Wood Thrush, 142; Barn Swallow, 141; Yellow-breasted Chat, 138; Brown-headed Cowbird, 129; Orchard Oriole, 121; Carolina Chickadee, 117; Mourning Dove, 108; Chimney Swift, 107; Eastern Kingbird, 105; Tufted Titmouse, 77; Red-bellied Woodpecker, 61; Brown Thrasher, 58; White-eyed Vireo, 58; Yellow-billed Cuckoo, 57; Summer Tanager, 52; Dickcissel, 50; Yellow-shafted Flicker, 44; Acadian Flycatcher, 41; Rough-winged Swallow, 39; Wood Pewee, 36; Downy Woodpecker, 32; Purple Martin, 31; Red-eyed Vireo, 30; Field Sparrow, 29; Great Crested Flycatcher, 26; Common Crow, 23; Blue Grosbeak, 20; Catbird, 19; Loggerhead Shrike, 18; Killdeer, 18; Prothonotary Warbler, 16; Green Heron, 15; Turkey, 15; Blue-gray Gnatcatcher, 13; Parula Warbler, 13; Kentucky Warbler, 11; Baltimore Oriole, 11; American Redstart, 9; Red-headed Woodpecker, 7; Grasshopper Sparrow, 7; Warbling Vireo, 6; Eastern Bluebird, 6; Fish Crow, 5; Ruby-throated Hummingbird, 4; Wood Duck, 4; Pileated Woodpecker, 4; Mississippi Kite, 4; Swainson's Warbler, 4; Hooded Warbler, 3; Horned Lark, 3; Yellow-throated Vireo, 3; Eastern Phoebe, 3; Yellow-throated Warbler, 2; Belted Kingfisher, 2; Red-tailed Hawk, 2; Yellow-crowned Night Heron, 2; Chipping Sparrow, 2; Common Nighthawk, 1; Hairy Woodpecker, 1; Cerulean Warbler, 1; Turkey Vulture, 1; Broad-winged Hawk, 1; Common Egret, 1; Little Blue Herron, 1; Painted Bunting, 1; Bewick's Wren, 1.

A roadside count is, to some extent, weighted in favor of certain species. But, on June mornings, a large percentage of the birds present within an appreciable distance will be heard. Some species may be relatively quiet during short periods and there are other variables (including the observer factor). If some wooded bottoms and ravine areas (not otherwise visited) had been walked, relatively more warblers (except the Chat and Yellow-throat) and two vireo species might have been listed. However, we do not, now, have many such areas. One route was by road through Shelby Forest. For some reason, Cerulean, Yellow-throated and Hooded Warblers were low; absence of the Louisiana Water-thrush would warrant a special search for the sepcies at the first chance. The number of Wood Thrushes indicates that routes passed close to woods at many points. If it had been practical to take some of the routes along noisy city streets, the relative number of Robins, Towhees, Mocking-Birds, Starlings, Grackles, and House Sparrows would have been increased; to a lesser extent, Catbird and Brown Thrasher. One or two Sparrow Hawks might have been found in town. Late evening runs might have shown more Mourning Doves. Night runs in the right areas would have added the Chuck-Will's-widow and Barred Owl, with remote chances for Great Horned Owl and Screech Owl. Certain town areas after dark would add to the single Nighthawk seen. The Hairy Woodpecker and hawks and vultures were low. The Cooper's Hawk may not be seen here for a year or two at a time; the Black Vulture and Red-shouldered Hawk have become uncommon. All herons, except the Green Heron, are now uncommon, but the Yellow-crowned Night Heron is now nesting in Riverside Park. Other species now absent or difficult to find as summer residents here, are: Pied-billed Grebe, Great Blue Heron, King Rail, and Bachman's Sparrow. The White-breasted Nuthatch (0) and Bewick's Wren (1) have always been very uncommon here. The Painted Bunting is local but it does seem to be absent now from the Riverside Park bluff and edges.

One item of interest is that this list of 80 species includes about fourteen that were not summer residents about 50 years ago; some are high in the list. These, with approximate year of first nesting in Shelby County, are: Robin (1918), Horned Lark (1932), Painted Bunting (1933), Barn Swallow (1935), Starling (1935), Rufous-sided Towhee (1941), Cerulean Warbler (1942) Eastern Phoebe (1947), Blue Grosbeak (1960). The first state record for the Fish Crow was in 1931, for the Mississippi Kite, 1932. The Broad-winged Hawk, Red-tailed Hawk, and Grasshopper Sparrow also moved in from the north during this period.

672 N. Belvedere, Memphis 38107.

NOTICE

Birds of the Nashville Area, revised by Henry E. Parmer is available by mail for $1.25 from Mike Bierly, 3826 Bedford Avenue, Nashville, Tennessee 37215. The booklet was originally published in 1966 and was reviewed in *The Migrant* 37:16. The revised edition contains over 100 changes and three additional species. It would be useful to all birders of Tennessee and surrounding area as a reference to bird distribution in this area.

ROUND TABLE NOTES

HERONRY AT DYERSBURG IS NO LONGER ACTIVE—The heronry on U. S. 51 just north of Dyersburg in the industrial park is no longer active. This heronry has been the subject of notes by myself, (*The Migrant* 39:59) by Mrs. Ben Coffey, (*The Migrant* 35:54) and by Albert Ganier (*The Migrant* 31:48-49).

The heronry was active in 1969 but with fewer birds than in the prior year. The species mix had changed drastically over the past few years. The number of Cattle Egrets had been increasing while the Common Egret and Little Blue Heron had been declining. There has been a large decline in the Common Egret.

During the past two years there had been increased local concern for the heronry and it was the subject of a number of newspaper articles including an excellent one in the Commercial Appeal by Jan Taylor. Mack Prichard had worked with several of the local organizations and had enlisted their aid in preserving the heronry. However, the precarious location made it difficult to save it. It was merely a row of trees with the industrial park on one side and a subdivision on the other.

I made two trips to the area of the heronry this spring, one in May and the other in June without seeing a single bird. I had a letter from John Hughen, owner of part of the property where the heronry was located. He stated that the birds came back in April but only stayed for a few days. He said that every so often a stray spends the night. He said that he sort of missed having them around in spite of inconveniences he had to put up with because the heronry was only about a hundred yards from his house.

Kenneth Leggett, P. O. Box 16, Pinconning, Mich. 48650.

LITTLE BLUE HERONS IN GREAT SMOKY MOUNTAINS NATIONAL PARK—On 29 August 1969, at 11:15 (EDT) I observed nine large white birds in flight at treetop level over the eastern entrance to Cades Cove, Great Smoky Mountains National Park. As I watched, the birds came to rest in the tops of three American Sycamore (*Platanus occidentalis*) trees at a height of approximately sixty feet above the ground. The trees stand along a branch of Abram's Creek and approximately 100 yards WNW of the Cades Cove sewage lagoons. I approached the birds on foot to a distance of 80 feet. Twice during this approach the birds left the treetops in short flights, but each time returned to their former perches.

All nine were Little Blue Herons (*Florida caerulea*) in the white plumage of immature birds. The tips of the primaries were a bluish slate-color; the legs, feet, and lores, greenish-yellow; mandibles bicolored, bluish with black tips. Binoculars used were 7 x 35 and the minimal distance to the birds was around 75 feet. The sky was clear with high-scattered clouds and the temperature was 83°F.

I observed the birds for 20 minutes during which time they remained in the trees. I left, returning shortly with Dennis Huffman, Cades Cove Ranger, and together we watched the birds another 10 minutes. I last observed them still sitting in the crowns of the sycamores at 12:05 (EDT).

This constitutes the second record for this species for the Great Smoky Mountains National Park. Arthur Stupka in his "*Notes on the Birds of the Great Smoky Mountains National Park*" (p. 21, University of Tennessee Press, 1963) lists only one record for this species by Joe F. Manley along the West Prong of the Little Pigeon River, between Gatlinburg and the Park Headquarters area. His observation of a single bird, in the white plumage of an immature, was on 19 November 1939.

Fred J. Alsop, III, Department of Zoology and Entomology, University of Tennessee, Knoxville 37916.

LEAST BITTERN NESTING IN BLOUNT COUNTY—On 28 May 1970, while searching for Red-winged Blackbird nests in the Maryville Marshes of Blount County, Fred Alsop and I discovered the nest of a Least Bittern (*Ixobrychus Exilis*). This constitutes the first nesting record of this species for the area surrounding and including Knox County. No bitterns were seen about the nest. However, identification was made possible by an examination of the location and structure of the nest and measurements of egg shell fragments which lay beneath the nest. The nest was placed in cattails at a height of 18 inches. It was constructed entirely of cattail blades. The nest measured 6 x 12 inches. The exterior depth was 4 inches. There was no appreciable depression for a nest cup. The fragments of at least 4 eggs were found beneath the nest. Two of the fragments were complete enough to yield measurements. Both measured 30 x 23 mm. Bent gives the average measurements of Least Bittern eggs as 31 x 23.5 mm. (Bent, A. C. 1926, *Life Histories of North American Marsh Birds, U. S. National Museum Bulletin* 135.) The eggs were pale blue.

The dominant plant in the immediate vicinity of the nest was the cattail. The cattail area was fringed with willows. Three inches of water stood about the nest. Active nests of the Red-winged Blackbird were found near the bittern nest.

Morris D. Williams, Box 25, Five Points 38457.

MUTE SWAN IN SULLIVAN COUNTY—Bill Yambert, Tennessee Game and Fish Commission biologist, informed the writer on 23 January 1970, that a bird fitting the description of a Mute Swan (*Cygnus olor*) had been reported to his office by Louis Milhorn, a resident of Boone Lake. Several observers attempted to locate the bird on 24 and 26 January, but had no success.

On the afternoon of 27 January, Johnny Wood and J. Wallace Coffey went to Boone Lake and located the bird on the South Holston River Embayment approximately one-fourth mile north of Sugar Hollow in Sullivan County, Tennessee.

It was a clear, warm, and sunny day. With the sun to our backs, we employed a 30x telescope and Johnny Wood made several photographs with a 400mm telephoto lens. The bird appeared to be very shy and upon our approach began to swim away. We were unable to get closer than about 200 yards.

The swan appeared to be mostly white. The neck was held curved with the bill pointed downward. The bill was somewhat orange and tipped with black. A distinct knob was evident at the base of the upper mandible but did not seem as fully developed as shown in various popular field guides. The knob and area surrounding the base of the bill were mostly black. We did not see the wings raised above the back at anytime.

On 29 January, Dr. Lee R. Herndon joined the writer and observed the bird. The weather was overcast, rainy, and windy. He confirmed the identification as a Mute Swan and noted that the neck (nape) had a light brownish cast. This had not been previously observed in bright sunlight. This individual closely approached a definitive plumage. However, due to a general lack of reference material concerning the molt and plumage sequence of this species, little more has been concluded.

Louis Milhorn stated that the swan arrived in the area on or about 16 January, and was first seen by his daughter. He has been unable to approach the bird closely and has seen it flying over the lake at a height of several hundred feet and down the lake for a distance of a mile or more. Herndon and Coffey observed the bird in flight and noted the flight was strong and the bird seemed wild. Thomas W. Finucane reported that he had seen the bird and agreed that it was definitely a wild Mute Swan.

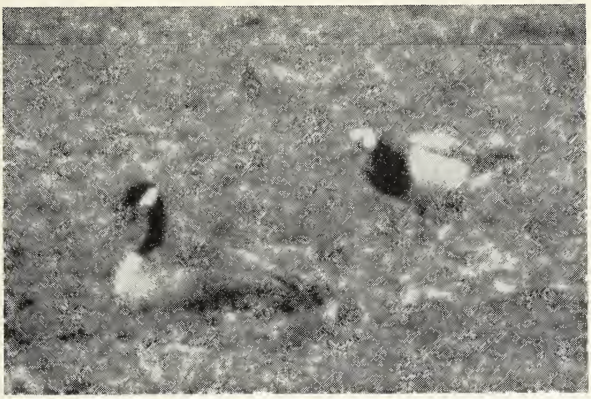
The last observation of this bird, of which we have record, was 21 Feb. 1970.

This record appears to be the first known occurrence of the Mute Swan in Tennessee. It has been "Introduced and naturalized in New York (lower Hudson Valley, Long Island and Gardiners Island); wanders to eastern Massachusetts, Rhode Island, New Jersey, Ohio (Cleveland), Pennsylvania (Erie Bay, Pymatuning), and West Virginia (Brooke and Jefferson Counties)" (see *Check-List of North American Birds,* [fifth edition] American Ornithologists' Union 1957, page 58.)

J. Wallace Coffey, 508 Spruce Street, Bristol 37620.

BARNACLE GOOSE AT TENNESSEE NATIONAL WILDLIFE REFUGE—On 2 March 1970, a Barnacle Goose (*Branta leucopsis*), was observed mingling with five Canada Geese at the Duck River Unit of the Tennessee National Wildlife Refuge near Camden, Tennessee. Bob Easley, biological technician for the refuge, made the initial identification of this rare and unusual species, and notified me. (This is only the second recorded sighting in the state; the first was reported by Tony Koella in the September, 1969, issue of *The Migrant.*)

On my first visit, I observed the bird from approximately 50 yards with 7 x 50 binoculars and a 30x zoom spotting scope. It appeared to be about



two-thirds the size of the companion Canada Geese. The predominantly white head with black eye patch, extending across the bill in spectacle fashion, a black crown and nape, black chest, greyish upperparts and white breast, confirmed my identification. The Barnacle's coloration is markedly different from Snow, Blue, or Canada Geese. Because this species is monomorphic, it is visually impossible to determine whether this Barnacle is male or female. The Barnacle appeared to be amicably mingling with the Canadas. They engaged in playful pecking and feeding.

As recently as 24 April 1970, the goose was reportedly still in the area. The bird is residing in a restricted portion of the refuge, being usually observed in wheat fields adjacent to the dike which separates the farming portion of the refuge from the waters of the Tennessee River.

On subsequent visits, I have been able to view the bird from as close as 25 yards. This bird has been photographed many times by myself and others.

It would appear that the Canadas were unable to complete the Spring migration North, and may summer, and perhaps even nest on the refuge this year. The Barnacle appears to be in good condition, and I speculate that it remained behind with these Canadas, rather than continuing North with another flock. According to *Waterfowl of the World,* by Jean Delacour, Vol. 1, p. 180, Barnacle Geese and Canada Geese readily mate, and produce fertile young. The exciting possibility exists that hybrid goslings may be produced on the refuge this year. However, it might be mentioned here, that the birds have NOT been observed in a nesting situation; it is merely a possibility. High water during the months of April and May, at Tennessee Refuge, could hamper nesting conditions. Also, predators are more prevalent in this area than in the natural nesting habitat in the North, which might endanger young, if, indeed, any young birds were hatched. (Note: Barnacle Goose breeding grounds are found in Eastern Greenland.)

After notifying Henry E. Parmer, of Nashville, of the positive identification of this goose, many amateur and professional ornithologists from over the State have made visits to the refuge to add this species to their life lists. Among those who have contacted me are: Michael Lee Bierly, Roger O. Harshaw, John and Heather Riggins, all of Nashville, and Mrs. Don Manning, of McKenzie, Tennessee.

GARY N. BURKE, Ass't. Manager, Box 849, Tennessee National Wildlife Refuge, Paris 38242.

DARK-PHASED, ROUGH-LEGGED HAWK IN COFFEE COUNTY—While returning to Lebanon from a trip to Chattanooga on 9 February 1970, on US 41, my wife noticed a large hawk-like bird "hunting" along the side of a ridge which is located in a very prominent "saddle" midway between the town of Manchester and the community of Beech Grove. We returned to the point of her observation to look for it and shortly thereafter saw a large, dark hawk about 100 yards away hunting midway down the ridge which was partially pastured and the rest left fallow in broomsedge. Though quite large, it was apparent by its flight that this was neither of the vultures. Even though there were intermittent snow flurries and the day overcast, observation with 7x50 binoculars disclosed an almost uniformly dark, almost black, buteo with dark tail broken by a broad white line dorsally and ventrally. Even under adverse conditions it was apparent that this was not one of our "uncommon" but resident buteos, the Red-tailed or Red-shouldered Hawk nor was it large enough to be an eagle. The bird perched in a dead tree and upon consultation with Robbins, Bruun *et al*, *Birds of North America* (pp. 64ff) and Peterson, *A Field Guide to the Birds* (pp. 53-68), the bird was tentatively identified as a Rough-legged Hawk. After remaining perched for a few minutes the buteo flew along the side of the ridge, about 1/3 of the way from the top, hovered, disclosing very plainly black-tipped white primaries and a white base to the dorsal surface of the tail. We continued to watch this hawk hunting, soaring, and perched for about five more minutes until he "flapped" over the ridge toward Manchester and we proceeded homeward. The "hovering" behavior, according to Peterson, p. 64, is distinctive for this species. According to Henry E. Parmer, *Birds of the Nashville Area,* 2nd Ed. p. 10, this is a very rare winter visitor to Middle Tennessee.

REV. WILLIAM SENTER, 827 Castle Heights Ave., Lebanon 37087.

MERLIN (PIGEON HAWK) IN LEBANON—At 12:10 on Wednesday, 4 Feb. 1970 while observing birds with my 7x50 binoculars at my feeder and around the perimeter of my yard, I noticed a large bird perched in the top (about 40 feet) of a "snag" oak tree about 150 feet from my window and due east. As I observed it through my binoculars, two Blue Jays perched underneath it and began to harass it. Although there was about 1.5 inches of new fallen snow on the ground, the sky had cleared and the bird was facing directly into the sun (and facing toward the house). I was immediately impressed with a bright golden streaked chest. Closer scrutiny revealed a dark back, a long, light tail, the complete absence of any rufous color anywhere, and a facial pattern. After several minutes, the bird flew very rapidly almost directly overhead, and I was able to observe a definite falcon-like bend to the wings, light belly and under-wings, dark wing-tips and a barred tail. Being familiar with Kestrels (Sparrow Hawks), I eliminated this bird as being a member of that species because of the absence of red color, size (it was longer and larger and filled that perch on the snag more fully than does the Sparrow Hawk which occasionally looks over my yard) and flight (which was faster and less hump-shouldered than that of a Kestrel). Because of the presence of a facial pattern, streaked breast, and rapid flight I made a preliminary identification of a Peregrine Falcon, and called Mrs. Carole Knauth of Nashville for consultation. While talking with her and upon further reference to Peterson, *A Field Guide to the Birds* (pp. 54, 55, 66, 67 and 73) and Robbins, Bruun, *et al, Birds of North America,* I changed my earlier identification to that of a Merlin because, although large and with somewhat of a face pattern, this bird was not quite the size of a crow (which, according to Peterson is near the size of a Peregrine) nor was its wingspread as great as 40 inches (which according to Robbins, *et al,* p. 78-79 is that of a Peregrine). Shortly after concluding my call, I noticed the small birds at my feeders were "startled" to low cover and I searched the yard and discovered the falcon perched on a CB radio antenna about 45 feet high and 75 feet away to the North-west. This time I was able to get a side view and noted the brown back and streakings, again, the absence of any rufous color, and the brownish facial pattern which showed a vertical line through the eyes which was not quite as distinct as that shown for the Peregrine. In fact, the facial pattern and tail pattern more closely resembled those pictures of a Prairie Falcon in Robbins, *et al,* pp. 78-79; however, the Peregrine size and western range of that species rules out identification of this bird as being that species even though the facial patterns were similar. After about a minute, the falcon flew and again I was able to observe the rapidity of its flight, the bend of its wings and its light underbelly. Although it can be presumed from the behavior of the smaller birds at the feeder that the bird remained in the area, I did not see it again that day. Early the next morning, 09:00, I again observed the bird in the oak snag and captured a Starling and tied it down in the hopes of luring the falcon to attack; however, that was the last sighting.

On Friday evening, 6 Feb., 1970, I attended the records meeting of the Nashville TOS for discussion and collaboration of this find. After presentation and consultation, this sighting was accepted as an immature or female Merlin, or Pigeon Hawk. Prior to this, there had been only eight records since 1916 (Henry E. Parmer, *Birds of the Nashville Area,* 2nd Ed. p. 10). Although both Peterson and Robbins, *et al,* state the winter range of this falcon to be south of Tennessee, according to Parmer, there are records for the Pigeon Hawk in September, November, December, January, and March. Whether or not this was a late migrant pushed southward by the cold and snow of late January and early February, a winter resident of the Cumberland Plateau forced to the Basin by the same weather, a resident of this winter in the area, or an early spring migrant laying over for a few days, one can only guess.

Rev. William Senter, 827 Castle Heights Ave., Lebanon 37087.

KING RAIL IN THE GREAT SMOKY MOUNTAINS NATIONAL PARK—On the afternoon of 15 May 1970 Park Ranger Dennis Huffman and I were working the western end of Cades Cove along a section of Abram's Creek known as "the oxbow". I was searching for the nests and eggs of the Red-winged Blackbird (*Agelaius phoeniceus*) in the bullrushes and willows along the creek and in the wet-weather ditches that drain into the creek at that point. While wading the ankle-deep water in a patch of bullrushes about 40 yards from the main stream I flushed a King Rail (*Rallus elegans*). The bird flew past us and on for a distance of about 75 feet before dropping into the tall vegetation at the edge of the creek. A search was made in the area from which the bird was flushed for a nest, but none was found. Our efforts to put the rail up again were also unsuccessful.

On the afternoon of 19 May 1970 Morris Williams and I returned to the oxbow to secure Red-wing eggs. The King Rail was flushed again, this time about 100 yards from the previous site and from a wet ditch containing about six inches of water and a dense stand of Blue Flag (*Iris versicolor*). Again a search was made for a possible nest with none being located. And again the rail, which had flown approximately eighty feet, could not be found a second time.

Arthur Stupka (1963. *Notes on the Birds of Great Smoky Mountains National Park,* Univ. of Tenn. Press) lists but two previous records for this species in the Park. Both are late summer (9 Aug. 1959) and fall (28 Oct. 1947) records.

Fred J. Alsop, III, Dept. of Zoology and Entomology, University of Tennessee, Knoxville, 37916.

KING RAILS IN KNOX COUNTY—For several nesting seasons Ray M. Ellis, Jim Campbell, and I (FJA) have looked for evidence of breeding King Rails (*Rallus elegans*) in Knox County without success. On 26 May, 1970, Morris Williams and I were working a small marsh bordering the eastern end of the single runway of Powell airport in north-central Knox County. While searching a dense stand of Blue Flag (*Iris versicolor*) for nests of the Red-winged Blackbird (*Agelaius phoeniceus*) I heard the note of a marshbird near my feet. I followed the note of the unseen bird for several feet without once seeing the caller. A marker was placed in the area where the bird was first detected and with Morris' help a search for a possible nest was soon initiated. Approximately 10 feet from my marker I found the nest; under the toe of my left boot. The nest contained 7 eggs (two of which I had broken) and one downy young of the day.

The eggs were olive-brown in color with dark and cinnamon brown spots scattered over them. The two broken eggs were removed and the fragments later measured were approximately 39 x 28.5 mm. The two embryos looked as if they would have hatched in the next 48 hours. The young bird was almost two inches long and its pink legs were about as long as its body. The plumage was glossy-black except for the chin which was bright orange. The bill was entirely white. Photographs were taken of the nest, eggs, and young before the site was returned to its approximate previous condition. At 22:30 Gary Wallace, Jim Campbell, and I returned to the nest site. I heard the adult slip off and we found the young and 5 eggs still warm. This is the first evidence of King Rails nesting in Knox County in 18 years (Howell, J. C. and Muriel B. Monroe. 1957. The Birds of Knox County, Tennessee. *Journal of Tenn. Acad. of Sci.* 32(4):247-322).

On 2 June, 1970 the nest was collected. The base of the nest touched the ½ inch of water beneath it. The nest averaged 3¼ inches in height and was trapezoid shaped with the two parallel sides being 6½ inches, the short side 6 inches, and the long side 6¾ inches. The extreme width, diagonally, was 8½ inches. The top of the nest was only slightly concave. It was constructed almost entirely of a single species of grass (unidentified) that was found growing commonly throughout the marsh.

On 27 May, 1970, I (FJA) watched an adult King Rail feeding along the vegetated edge of a pond at Johnson Bible College in extreme southeastern Knox

County. This bird was still present on 13 June when it was observed and photographed by Mrs. E. E. Overton and Miss Jessie Dempster.

Fred J. Alsop, III, Dept. of Zoology and Entomology, University of Tennessee, Knoxville 37916.

KING RAILS IN BLOUNT COUNTY—On 28 May, 1970, Morris Williams and I (FJA) found 3 nests of the King Rail (*Rallus elegans*) in a small marsh of less than three acres within the city limits of Alcoa, Blount County, Tennessee. Each of the nests was placed in the base of a Great Bulrush (*Scirpus validus*). Each nest site was in bulrush that was surrounded by somewhat shorter marsh grasses and some distance from the next clump of bulrush. The first nest discovered was 5 inches above the water. It measured 4½ inches in depth and was 7½ inches across at its widest point, with a lip of approximately ½ inch. The bulrush it was in was 50 inches tall and the rail had bent much of it over 13 inches above the nest. It was built over water and was some 20 feet from a pool of open water. It appeared the nest had not been used, but subsequent trips revealed no further usage.

The second nest was across the open water and 75 feet from the first. It measured 4 inches in depth and 8 inches across with a lip of ½-¾ inches. It contained 12 eggs, medium olive-gray in color with cinnamon-brown and purplish splotches, which averaged 43 x 33 mm. On 29 May, Morris Williams and Jim Campbell found two of the cluch had hatched and the young were not seen. They returned on the afternoon of 31 May to find all except one of the remaining eggs had hatched and the nest was empty. Small pieces of the egg shells were found scattered in the water around the nest.

The third nest was located 100 yards from the second and about 20 feet from a stand of Cattail (*Typha latifolia*) and open water. It measured 5 inches in depth and 8 inches across with the cup depressed below the lip about one inch. Its appearance was one of a used nest-of-the-season. As with the other two, the bulrush had been bent over above the nest. All nests were constructed almost entirely of bulrush, only the third nest located had some finer grasses used as a liner for the cup.

Not once during the course of any of our visits did we see, or hear any sound given by, a King Rail, though on one occasion I saw tracks so fresh in the soft mud that water was still seeping into them.

Fred J. Alsop, III, Dept. of Zoology and Entomology, University of Tennessee, Knoxville, 37916.

EARLIEST TENNESSEE RECORD OF BUFF-BREASTED SANDPIPER—On the morning of Sunday, 3 August 1969, the observers encountered a Buff-breasted Sandpiper (*Tryngites subruficollis*) at Ashland City Marsh. The marsh is in the Cumberland River Bottoms near Ashland City, Tennessee, in Cheatham County. The marsh was in excellent condition for attraction of shore birds as the conservation personnel had partially drained it about two weeks before for the purpose of planting duck food. The vegetation was just beginning to sprout in mudflat areas and all along the edges of the marsh, and there was about a 20 yard strip of one inch high vegetation which merged with a 20 yard strip of bare, exposed mud that extended to the water.

The observers approached the marsh at approximately 10:00 on a clear, hot day with the sun behind them. They were at first engrossed in checking and identifying the various shore birds and did not notice the Buff-breasted Sandpiper for about 10 minutes. At that time their attention became centered on the bird whose head seemed similar to a Mourning Dove. The bird was feeding with Killdeer (5), Pectoral Sandpiper (1), Solitary Sandpiper (3), Semipalmated Sandpiper (1), and nearby Green Heron (4), Great Blue Heron (2), and Little Blue Heron (12).

Observations were made of this bird through Tasco 10 x 40 binoculars, Tasco 7 x 35 binoculars, and a Tasco 20 to 60 power spotting scope. The bird was observed feeding near a Killdeer, but it seemed to restrict itself to the mudflat edge farthest from the water; therefore, confining itself to the area nearest the short duck growth, while the Killdeer fed nearer but not on the water.

For about 45 minutes and under close scrutiny at a distance of 45 feet, the bird's characteristics were easily noted and compared with Peterson's and Robbins' Guides. The bird had a scaley back, medium length and bill, a buff-colored plain breast, short tail, pale legs, a white eye ring, and was observed to be smaller than the nearby Killdeer.

One of the observers walked along the marsh edge to get nearer the sandpiper and although it kept itself slightly ahead of the observer at a distance of about 15 feet, it showed no real concern. The observer "drove" this tame bird for about ¼ mile down the marsh, then succeeded in passing it and drove it back to the original starting point. At this point the observer walked up to his car to get his camera to photograph the bird, leaving his wife looking at the bird through the spotting scope. While the observer was getting his camera, his wife observed the bird flying back and forth across the mudflat several times and she remarked that the bird had very pale wings underneath. Before the observer had returned with his camera, the bird had flown away.

According to H. E. Parmer, this is the earliest sighting of the Buff-breasted Sandpiper in Tennessee.

One year later on Saturday, 8 August, 1970, the observers spotted a Buff-breasted Sandpiper in a freshly plowed field adjacent to Bush Lake in Nashville, Tennessee. It was in the company of Upland Plover (5), Pectoral Sandpiper (3), Killdeer (78), Horned Lark (1) and a large flock of Rock Doves. On the next day, 9 August, the Buff-breasted Sandpiper was sighted again, this time in the company of Semipalmated Plover (4), Pectoral Sandpiper (2) and Upland Plover (1). Other members of the TOS were contacted and the following saw the bird: M. L. Bierly, Roger Harshaw, Katherine A. Goodpasture, H. E. Parmer, Ann Tarbell.

John and Heather Riggins, 97 White Bridge Rd., Nashville 37205.

NORTHERN PHALAROPE IN WASHINGTON COUNTY—A Northern Phalarope (*Phalaropus lobatus*) was present at Austin Springs, Boone Lake, Washington County, Tennessee on 18 May 1969. The bird was discovered and subsequently identified by Charles R. Smith, Pete Range, Timothy M. Hawk and J. Wallace Coffey.

This represents the first spring migratory record and second known occurrence of this species in Tennessee. John C. Ogden previously reported two birds at Bush Farm, Davidson County on 21 October 1959 (*The Migrant,* 30:55).

The present observation occurred at 11:20 EST and was continued for forty minutes. The bird was observed with 7x35 binoculars and 30x Balscope within a range varying from ten to fifty feet. It swam with the characteristic phalarope action and was in close assocation with the Least Sandpiper, Semipalmated Sandpiper, Spotted Sandpiper, and Semipalmated Plover.

The bird was judged to be a female in definitive alternate plumage (*The Shorebirds of North America*, Gardner D. Stout, Editor, 1967, page 264). The characteristics of this individual will be given here as recorded in the field:

> "Showed black on brown with cinnamon patch joining crown patch extending down side of neck and across breast, being fainter on breast. Cinnamon band on breast bordered above by white throat and below by slate-gray grading into black . . . white spots at bend of wing . . . very small white spot above eye (may be white upper eyelid). Showed definite white wing stripe in flight. Underparts below breast band white. Breast band edged with white. Cinnamon extending up nape to back of head . . . black legs, bill and dark eye. White showed indistinctly in tail in flight. Edges of tail showed alternating black and white bars as in Solitary Sandpiper."

J. Wallace Coffey, 508 Spruce Street, Bristol 37620.

LONG-EARED OWL IN NASHVILLE—At 09:00 on 3 January 1970, a sunny day with temperatures in the twenties, the cries of jays brought the writer to her front porch. Not quite four feet from the side of the porch is a hackberry tree, the trunk and lower branches of which are covered with ivy. On a small dead branch about fifteen feet from the ground, where the trunk divides into two, partly shielded by the twin trunks, sat an owl considerably larger and somewhat slimmer than a Screech Owl, with two long, straight "ears." From Roger Tory Peterson's *A Field Guide to the Birds* (1947), he was identified as a Long-eared Owl (*Asio otus*). Although Peterson calls him gray, this owl appeared brownish, rather like a log mottled with lichens, except for his rusty face.

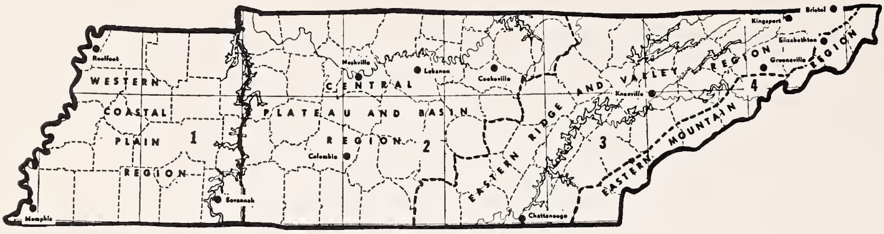
At the suggestion of Mrs. Carol Knauth, writer of weekly "Wing Tips" for the Nashville *Banner*, Dr. Katherine Goodpasture was called, and upon arriving confirmed the identification. She then called several other T.O.S. members, among whom Mr. Henry E. Parmer, Mrs. Anne Nichols, Mr. Roger Harshaw, Mr. John Riggins, and Mr. Mike Beirly saw and, in some instances, photographed the owl. He was under almost constant observation from 09:00 until about 16:00 when he flew across the street into the grounds of a currently unoccupied convent. He has not been seen again.

According to *Birds of the Nashville Area*, compiled by Henry Parmer, there have been only three previous sightings of the Long-eared Owl in the vicinity of Nashville, one collected by Grover Cooke on 12 January 1923, another by Albert Ganier on 3 February 1946, and a third brought wounded to Mrs. Amelia Lasky on 3 January 1950, which she gave to the Children's Museum after it died.

Violet Jane Watkins, 1402 17th Avenue South, Nashville 37212.

THE SEASON

Charles R. Smith, *Editor*


Reelfoot
WESTERN COASTAL PLAIN REGION
1
Memphis
Savannah
Nashville
Lebanon
Cookeville
CENTRAL PLATEAU AND BASIN REGION
2
Columbia
EASTERN RIDGE AND VALLEY REGION
3
Knoxville
Chattanooga
Kingsport
Bristol
Elizabethton
Greeneville
EASTERN MOUNTAIN REGION
4

Temperatures for the months of May, June and July were about normal, but perhaps averaging slightly on the high side. Rainfall for the first part of the period was about normal, but for all of June and the first half of July was deficient in rainfall, particularly in the eastern portion of the state.

All of the species reported for the Western Coastal Plains Region are exceptionally noteworthy and for some of the species reported might indicate a probable extension of the breeding range. In future breeding seasons intensive efforts should be made to locate breeding birds in favorable habitats.

The Song Sparrow has definitely extended its breeding range to the westward in the state, as a nest was reported for the Nashville area this season.

Reports of Purple Gallinules appear more frequently than formerly and were reported from Hiwassee River and Knoxville areas, both being in the Eastern Ridge and Valley Region.

Traill's Flycatchers have extended their breeding range southwestward to lower elevations and for the first time reported to have nested in Knox County.

Bank Swallows have nested for the second consecutive season in the gravel pits near Austin Springs on the Watauga River prong of Boone Lake. If they nest in this area again, it must of necessity be at a different location because the bank in which they have nested has been leveled by sand and gravel operators.

For the second consecutive summer Buffleheads (two females this season) have remained on Wilbur Lake in the Eastern Mountain Region.

WESTERN COASTAL PLAIN REGION—*Osprey-Siskin:* Osprey: One nest produced (3) young this season, R (JDL). Scissor-tailed Flycatcher: 16 May (1) T (DP, VTM). Vermilion Flycatcher: 12 May (1) D (JSL), Chestnut-sided Warbler: 4-22 June (1, male) S (DEP). Pine Siskin: 10 May (2) R (BC), 11 May (20), and 13 May (3) D (JSL).

Locations: D—Dyersburg, R—Reelfoot, S—Savannah, T—Tiptonville.

Observers: BC—Ben B. CoffeyJr., JDL—John DeLime, JSL—Mrs. John S. Lamb, VTM—V. T. Martin, DEP—David Patterson, DP—David Pitts.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN AREA — *Loons-Ducks:* Common Loon: 24 May (1) ACM (MLB). Great Blue Heron: 18, 25 July (1) ACM (J,HR)*. Green Heron: abundant during period WB (FB). Little Blue Heron: 29 June (1) WR (LR, KHD), 18 July (4) ACM (J,HR). Cattle Egret: 12 May (1) Kingston Springs (RF), second NA record. Black-crowned Night Heron: 21 May (5) BL (HEP, HS), 23 May to 4 July (20+) BV (J,HR). Yellow-crowned Night Heron: 3 June thru period (2-5) BV (J,HR) 11 to 19 July (1-3) WB (FB). Least Bittern: 21 May (2) LD (RTH). Canada Goose: two seen at nest in June PPL (JP)*. Gadwall: late, 3 May (1) LD (RTH). Blue-winged Teal: last, 23 May (1) BV (J,HR), then early, 15 July (5) on river NA (J,HR). Wood Duck: 23 May (41), 6 June (17), (14) being immatures ACM (MLB, J,HR), 15 July (12) RL (MCW). Hooded Merganser: late, 7 May (1) LD (RTH).

Vultures-Owls: Turkey Vulture: 25 May (31) RR, WB (MCW). Cooper's Hawk: 21, 26 June (1) LD (RTH)*. Broad-winged Hawk: a few reports from LD, WB, NA. Marsh Hawk: unusual was (1) H BT 4 July (RH). Osprey: 17 May (1) ACM (JDV)*. American Coot: last NA was 23 May (3) BV (J,HR) and (1) ACM (MLB). Semipalmated Plover: 17 May (1) ACM (JNR). Killdeer: 4 July (23) BV (J,HR) was the beginning of the usual late summer movement in NA. Spotted Sandpiper: last were 16 May (3) LD (RTH), 17, 19 May (1) WB (FB), 23 May (1) BL (J,HR). Then 4 July (1) ACM (MLB), 6 days earliest fall record NA. Solitary Sandpiper: also very early, 4 July (1) ACM (J,HR) Lesser Yellowlegs: 18 July (1) ACM (J,HR). Pectoral Sandpiper: 18 July (5) ACM (J,HR)*. Least Sandpiper: 17 May (3) ACM)*. Semipalmated Sandpiper: 3 June (21) (J,HR), 4 June (18) (JNR) BV, one day latest ever NA. Least Tern: 3 June (1) BV (J,HR, MLB, HEP), third NA record. Great Horned Owl: 18 May (1) LD (RTH), 20 May (1) BT (RH)*. Barred Owl: 5 May (2), 11 May (2 with 1 young) LD (RTH), all period (4) H BT (RH).

Goatsuckers-Shrikes: Whip-poor-will: (1-7) H BT (RH) all period. Common Nighthawk: 26 July (1) BT (RH), only observation there for period! Red-cockaded Woodpecker: 8 May (1) Catoosa (KHD)*. Eastern Kingbird: 18 July (1) WB (MCW), continued fairly common NA. Acadian Flycatcher: 22 June (2) feeding young in nest LD (RTH). Olive-sided Flycatcher: 29 May (1) injured bird caught FV (MD, AC), died 2 days later H (ARL). Horned Lark: (1-5) period LD (RTH)*. Cliff Swallows: normal nestings RR, NA, and ACM. House Wren: (3) nesting pairs near H KAG*. Wood Thrush: 29 May incubating FV (JOE). Swainson's Thrush: (1-3) H until 21 May BT (RH), last NA 25 May (1) H (SB). Gray-cheeked Thrush: 19 May (1) H (AT)*. Veery: 6 May (1) H SB*. Loggerhead Shrike: none during period BT (RH).

Warblers: Golden-winged: very late, 24 May (2) Dunlap (LR, *fide* KHD). Tennessee: last report, 14 May (1) H (AT). Orange-crowned: 3 May (1) (MLB)*. Yellow: 25 May (25) RR, WB (MCW). Magnolia: last, 11 May (1) H (AT). Myrtle: late, 2 May (6) H (AT). Black-throated Green: 12 July (6) PSP (RH)*. Blackburnian: 16 June active nest found FCF by Mark Wagner. Bay-breasted: 11 May (1) H (AT)*. Blackpoll: last, 12 May (3) H (AT). Pine: 12 June (1) PSP (RH). Ovenbird: 6-15 May

(1) LD (RTH), 12 July (common) PSP (RH). Kentucky: 17 May nest (2 eggs, plus 3 Cowbird eggs), 22 May (1 Kentucky and 2 Cowbird young) FV (JOE). Yellowthroat: (20-43) on trips thru period WB (MCW). Yellow-breasted Chat: 25 May (18) RR, WB (MCW). Canada: last, 14 May (1) RL (AT).

Bobolinks-Sparrows: Bobolink: 1 June (1) Jasper (KHD). Orchard Oriole: 25 May (17) RR, WB (MCW), 25 July first year male feeding (3) immatures RR, NA (J,HR). Baltimore Oriole: 6 June adults feeding young H (AT), 21 June same (J,HR). Rose-breasted Grosbeak: either scarce or left early, 1 May (1) Rickmon (RTH) 2 May (1) H (AT)*. Blue Grosbeak: in good numbers over area as last year. Indigo Bunting: 25 May (61) RR, WB (MCW). Dickcissel: 1 June (12) TC (KHD), 26 June (2) BLV (MLB), 8 July (1) WB (FB)*. Evening Grosbeak: 12 May (1) H BT (RH)*. Pine Siskin: 5 May (1) H (GBW)*. Grasshopper Sparrow: 1 June (9) TC (KHD), 8-15 July (2) H BT (RH)*. Slate-colored Junco: 11 May (2) H (AT)*. White-crowned Sparrow: last, 6 May (1) H (MLB). White-throated Sparrow: 2 June (1) H (RE), heard by (KAG, MLB). Song Sparrow: (2) pair H BT thru period (RH), 1 June (2) Viola (KHD), 9 June (6) Jasper (KHD), 19 June first NA nest found near H (LJ).

Note: the asterisk (*) is used to denote that these records are the only ones received for a species by the writer.

Locations: ACM—Ashland City Marsh area, BL—Bush Lake, BLV—Bellevue area, BT—Byrdstown, BV—Buena Vista Marsh, FCF—Falls Creek Falls Park, FV—Fernvale, H—home area, LD—Lilydale, NA—Nashville Area, PPL, Percy Priest Lake, PSP—Pickett State Park, RL—Radnor Lake, RR—River Road, TC—Tracy City, WB—Woodbury, WR—Woods Reservoir.

Observers: SB—Sue Bell, MLB—Mike L. Bierly, FB—Frances Bryson, AC—Annella Creech, MD—Milbrey Dugger, KHD—Kenneth H. Dubke, RE—Roy Elliott, JOE—John O. Ellis, RF—Rachel Farris, KAG—Katherine A. Goodpasture, RH—Robbie Hassler, RTH—Roy T. Hinds, LJ—Louise Jackson, ARL—Amelia R. Laskey, HEP—Henry E. Parmer, JP—Jimmy Parrish, LR—Lil Richards, J,HR—John N. and Heather Riggins, HS—Hugh Savage, AT—Ann Tarbell, JDV—J. D. Vaudrey, MCW—Mary C. Wood, GBW—George B. Woodring.

HENRY E. PARMER, 3800 Richland Ave., Nashville 37205.

EASTERN RIDGE AND VALLEY REGION — *Loons-Mergansers:* 14 May (1) BD (TF). Pied-billed Grebe: 5 May (1) HRA (KD). Little Blue Heron: 30 June (3) HRA (KD), 3 July (3) CC (JMC, JCH), 20 July (1) AS (LRH, PH, CRS). Common Egret: 30 June and through period (1 to 28) HRA (KD), 3 July (1) CC (JMC, JCH). Black-crowned Night Heron: through period (1 to 4) K (FA, JMC). Yellow-crowned Night Heron: 5 July (1) AM (KD), 10 July (1) MB (KD). Least Bittern: through period (1 to 5, no nests found) AM (KD), 28 May (nest, abandoned, remains of 3-4 eggs) BC (FA, MW). American Bittern: 6 May (1) DA (LS), 17 May (1) AM (KD). Black Duck: 13 May (2) K (JMC). Lesser Scaup: 19 May (2) C (KD). Red-breasted Merganser: 3 May (3) K (FA, JA, JMC, JS, LOS, MW), 19 May (1) CL (KD).

Hawks-Sandpipers: Sharp-shinned Hawk: 27 June (nest, both adults, 3 young) CC—Cross Mountain (JMC, JCH). Red-tailed Hawk: 19 May (1 young in nest) EB (KD). Red-shouldered Hawk: one nest DA (date and success not known) (LS), 7 June (1) CC (JCH, FO), 21 June (1) CC (JMC, JCH). Osprey: 3 unsuccessful nests (2 on WBL and 1 on CL) (KD). King Rail: 26 May (1 adult, nest with 7 eggs and 1 newly hatched chick) K (FA, MW), 27 May (1) K, different location (FA), 28 May (3 nests, one with 12 eggs and other two empty) BC (FA, MW). Sora Rail: 3 May (1) K (JMC), 6 May (1) K (JMC), 6 May (1) AM (KD), 11 May (1) K (FA). Purple Gallinule: 12 May (1) HRA (KD), 26 May (1) K (FA, MW). American Coot: last, 16 May (1) K (FA, JMC, MW). Woodcock: 3, 19 May, 10 June (1) (1 and 2) K (FA, MW). Common Snipe: unusually late spring record 20 May (1) K (FA). Spotted Sandpiper: 28 June (2) AS (PR, CRS), 28 June (1) K (JTT) either very late spring, very early fall, or territorial ? Solitary Sandpiper: last spring, 12 May (1) K (JMC), earliest fall, 20 July (1) AS (LRH, PH, CRS). Greater Yellowlegs: earliest fall, 27 July (1) HRA (KD). Lesser Yellowlegs: latest spring, 7 May (1) JC (PR), earliest fall, 27 July (3) HRA (KD). Pectoral Sandpiper: latest spring, 16 May (1) K (FA, JMC, MW), earliest fall, 11 July (2) SB (KD). Least Sandpiper: latest spring, 27 May (1) K (FA). Dowitcher (species undetermined); 6 May (11) AM (KD). Semipalmated Sandpiper: latest spring, 1 June (1) AM (KD). Western Sandpiper: 21 May (1) Col (ML).

Terns-Veery: Black Tern: 19 May (3) OW (KD), 28 July (2) HRA (KD). Barn Owl: occasionally through period (1) AM (KD), 17 May (1) JC (CRS). Yellow-bellied Sapsucker: unusually late spring, 2 May (1) K (FA, JMC). Traill's Flycatcher: 7 May (1) Ki (TF), 29, 31 May (2) BC (JMC, MW), 5 June (1) BC (FA), 18 June (2 adults, nest with 4 eggs) first Knox County nest reported (FA, JTT), 24 June (1) BC (JMC, JCH), 21 and 28 June, 20 July (1) AS (CRS), 22 June (3) HRA (KD, LS, MWa), 28 and 29 June, 1 and 10 July (1) MB (KD). Least Flycatcher: 7 and 21 June (1) CC (JCH). Olive-sided Flycatcher: 6 May (1) K (BL). Tree Swallow: 29 July (2) SB (KD). Bank Swallow: 21 June (2) AS (CRS), 28 June 8—possibly 4 nesting pairs) AS (CRS), 29 July (2) SB (KD). Cliff Swallow: 16 May (14 active nests, first Knox County nest reported) K (FA, JMC, MW), 23 May (2 active nests) BC (JTT), during June (214 active nests) GC (GW). House Wren: 28, 29 May, 1, 2 June (1) C (KD). Bewick's Wren: 5 May (1) HRA (KD), 11 June (1) SP (LS). Veery: 2 May (1) K (JMC), 6 May (1) K (BL).

Vireos-Sparrows: Philadelphia Vireo: 9 May (1) K (JMC). Warbling Vireo: 3 May through period (2, no nest found) K (JMC), 20 and 28 May (1) Ki (TF). Swainson's Warbler: 31 May and 11 June (1) CC (JCH), 21 June (1) CC (JMC, JCH), all three observations apparently were the same bird. Brewster's Warbler: 2 May (1) K (FA, JMC). Northern Waterthrush: 1 May (1) Ki (TF), 4 May (1) K (BL). Baltimore Oriole: 21 June (1) CC (JMC, JCH). Dickcissel: 12 May and 8 June (1) HRA (KD). Pine Siskin: last 9 May (3) K (JMC). Red Crossbill: 2 and 3 May (17 and 10) K (FA, JMC), 4 May (1) Ki (TF). Grasshopper Sparrow: found in 3 Chattanooga areas (KD, LS) and in two Knoxville areas (FA, JMC, MW). Many areas noticed absence or reduced numbers.

Locations: AM—Amnicola Marsh, AS—Austin Springs, BC—Blount County, BD—Boone Dam, CC—Campbell County, C—Chattanooga, CL—Chickamauga Lake, Col—Collegedale, DA—Daus, EB—Eaves Bluff, GC—Grainger County, HRA—Hiwassee River Area, JC—Johnson City, K—Knoxville, Ki—Kingsport, MB—Moccasin Bend, OW—Old Washington, SB—Savannah Bay, SP—South Pittsburgh, WBL—Watts Bar Lake.

Observers: FA—Fred Alsop III, JA—Jean (Mrs. Fred) Alsop, JMC—James M. Campbell, KD—Kenneth Dubke, TF—Tom Finucane, JCH—Joseph C. Howell, LRH—Lee R. Herndon, PH—Patrick Helton, BL—Beth Lacy, ML—Mike Lilly, FO—Frances (Mrs. Earl) Olson, PR—Peter Range, CRS—Charles R. Smith, LS—Lee Shafer, JS—Johneta (Mrs. Louis) Smith, LoS—Louis Smith, JTT—James T. Tanner, GW—Gary Wallace, MW—Morris Williams, MWa—Mark Wagner.

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EASTERN MOUNTAIN REGION—*Herons-Flycatcher:* Little Blue Heron: 26 July (12) RC (PR). Bufflehead: throughout May, June, July (2) WiL (GE *et al*). Osprey: 26 July (1) WaL (PR). American Coot: 28 July (1) WiL (MS). Semipalmated Plover: 26 July (3) RC (PR). American Woodcock: 18 June (1) WaR (GE). Spotted Sandpiper: 26 July (5) RC (PR). Solitary Sandpiper: 26 July (2) RC (PR). Traill's Flycatcher: 21 June (3) RM (TWF, CRS), 25 June (2) RM (GE, CRS).

Raven-Crossbill: Common Raven: throughout June (1-3) RM (FWB, GE). Gray-cheeked Thrush: only report, 12 May (1) HC (MS). Yellow-throated Vireo: last 4 May (1) EGC (LRH). Golden-winged Warbler: throughout June, July (4-6) HM (PR). Yellow-throated Warbler: 21 June (1) RM (TWF, CRS), 25 June (2, nesting) DLG (CRS). Pine Siskin: 9 May (75) RM (CRS), 16 May (12) RM (FWB). Red Crossbill: 30 May-21 June (3-17) RM (FWB, GE). White-winged Crossbill: 25 May (40) RM (FWB).

Locations: DLG—Devil's Looking Glass, Unicoi Co., EGC—Elizabethton Golf Course, HC—Heaton Creek, HM—Holston Mountain, Camp Tom Howard, RC—Roan Creek area of Watauga Lake, RM—Roan Mountain, WaL—Watauga Lake, WaR—Watauga River, WiL—Wilber Lake.

Observers: FWB—Fred W. Behrend, GE—Glen Eller, TWF—Thomas W. Finucane, LRH—Lee R. Herndon, PR—Pete Range, CRS—Charles R. Smith, MS—Maxie Swindell.

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Davidson, Mr. Edward, Rt 7, Elizabethton, TN 37643-----------------1957
Davis, Mr. & Mrs. Johnny C., Rt 1, Johnson City, TN 37601----------1969
Daywitt, Mr. & Mrs. H. H., 203 Oak Lane, Johnson City, TN 37603----1962
Deal, Mr. Tommy, 619 Gibson Dr., Madison, TN 37115-----------------1966
DeBrohun, Mrs. Leon, 137 3rd Ave. N., Franklin, TN 37064-----------1951
Delantonas, Mr. & Mrs. Gerry, Rt 1, Abingdon, VA 24210-------------1968
Dempster, Miss Jessie, Rt 3, Ginn Rd., Knoxville, TN 37920---------1955
Denney, Mr. Dan, Jr., 111 Oak Hill Circle, Lebanon, TN 37087-------1969
Denton, Dr. Fred J., 529 Henderson Dr., Augusta, GA 30904---------1950
Deupree, Mrs. William W., 1730 Glenwood Place, Memphis, TN 38104---1957
Deutsch, Dr. Richard, 20 N. Larchmont, Memphis, TN 38111-----------1960
Devore, Mr. Jon, 4822 Sarasota Dr., Hixson, TN 37343---------------1966
Dickey, Mrs. Ernest, 801 Prospect Ave., Bristol, VA 37622----------1950
Dillenbeck, Mrs. Harold L., 1410 Strawberry Lane,
Johnson City, TN 37601--1964
Dillon, Mr. S. Tenison, Box 194, Dundee, IL 60118------------------1963
Dinkelspiel, Mr. & Mrs. Henry, 6519 Massey Lane, Memphis, TN 38117--1957
Doak, Miss Ruby, 604 Holston Dr., Gatlinburg, TN 37738-------------1957
Dobbs, Mrs. Ruby, 6003 Deal Ave., Nashville, TN 37209--------------1968
Douglas, Mrs. Byrd, Abbott Martin Rd., D-2,
Nashville, TN 37215---1959
Dove, Mrs. George, 1801 Seminole Dr., Johnson City, TN 37601-------1966
Dozier, Mr. & Mrs. J. I., 922 Lynnwood Blvd., Nashville, TN 37205--1969
Dowdy, Mr. & Mrs. Quentin, 3630 Sharpe Ave., Memphis, TN 38111-----1966
Draughon, Miss Dorothy, 1708 Cedar Lane, Nashville, TN 37212-------1968
Duchein, Miss Annette, Box 431, Spartanburg, SC 29301--------------1961
Dugger, Mrs. Milbrey, 1500 Woodmont Blvd., Nashville, TN 37215-----1958
Duke, Mr. & Mrs. R. D., Rt 3, Cloverdale Dr., Brentwood, TN 37027--1970
Dulemba, Mr. & Mrs. Henry S., #39 Belmeade Apts., 3725 Fountain Ave.,
Chattanooga, TN 37412---1970
Duncan, Mrs. Minnie, 512 Michigan Ave., Oak Ridge, TN 37830-------1966
Durrett, Mrs. Dora, 30 Tunnel Dr., Mountview Apt. #202,
Chattanooga, TN 37411---1964

Eastes, Mrs. Alyne, P. O. Box 393, Lebanon, TN 37087---------------1968
Edwards, Mr. & Mrs. May J., 5425 Lynnette Dr., Knoxville, TN 37918--1968
Elam, Mr. & Mrs. Nelson, Rt #4, Franklin, TN 37064-----------------1967
Eller, Mr. Glen, Rt 3, Elizabethton, TN 37643----------------------1970
Elliott, Mr. & Mrs. Roy C., Jr., 404 Hollydale Dr.,
Nashville, TN 37217---1967
Ellis, Mr. & Mrs. Paul, Jr., 2724 Wortham Dr., Nashville, TN 37215--1970
Ellis, Mr. & Mrs. John O., 4004 Overbrook Dr., Nashville, TN 37204--1960
Elmore, Mrs. Erline C., 2709 Sunset Place, Nashville, TN 37212-----1963
Elson, Mr. & Mrs. John, 300 Hermitage Rd., Knoxville, TN 37920-----1958
Embury, Mr. & Mrs. John H., 212 N. McLean Blvd., Memphis, TN 38112--1960
Emmel, Mr. & Mrs. Dan, 635 Chester St., Bristol, VA 24201----------1970
Enloe, Miss Mary E., RFD #1, Box 193, Franklin, NC 28734-----------1955
Epperson, Mr. & Mrs. H. C., 519 Maryland Ave., Bristol, TN 37622---1952
Evenson, Mr. Roy, Point Park, Lookout Mtn., TN 37350---------------1964
Everly, Mrs. K. B., 3809 Nolensville Rd., Nashville, TN 37211------1951

Farnsworth, Miss Dora, 346 Hawthorne St., Memphis, TN 38112--------1964
Farrell, Dr. Charles E., 109 S. Bellevue Dr., Nashville, TN 37205--1954
Farris, Mrs. Carter M., Rome Pike, Lebanon, TN 37087---------------1964

Farris, Miss Rachael, 4911 Sewanee Rd., Nashville, TN 37220--------1964
Faucette, Mr. & Mrs. Robert G., 705 Taylor St., Bristol, TN 37622---1960
Felix, Mr. E. L., 1222 Rocky Hill Rd., Knoxville, TN 37919---------1955
Fenn, Mrs. W. L., 1012 The Tower, Chattanooga, TN 37403------------1958
Fentress, Mr. & Mrs. Wm. E., Route #2, Brentwood, TN 37027---------1952
Finch, Dr. & Mrs. W. C., Emory & Henry College, Emory, VA 24327----1967
Finucane, Mr. Joe, 1434 Watauga St., Kingsport, TN 37664-----------1965
Fischer, Mr. & Mrs. William, 1243 Robinhood Rd., Greeneville, TN 37743---1967
Fisher, Mr. T. W., 1204 Grantland Dr., Murfreesboro, TN 37130------1970
Fleischmann, Mrs. Walter, 1406 Lynnwood Dr., Johnson City, TN 37601-1966
Fleming, Mrs. Mary Ann, 5504 California Ave., Nashville, TN 37209---1968
Ford, Mr. Mike, 520 Sampson, Dyersburg, TN 38024-------------------1969
Fort, Mr. & Mrs. Combs, 1040 Parkwood Terrace, Nashville, TN 37220--1970
Fort, Dr. Garth E., 1900 Old Hickory Blvd., Brentwood, TN 37027----1960
Foster, Mr. & Mrs. G. Lloyd, Box 177, Townsend, TN 37882-----------1965
Foster, Mr. & Mrs. J. P., 5817 Fredericksburg Drive, Nashville, TN 37215---1966
Francisco, Mrs. Earl, 312 Hidden Valley Rd., Bristol, TN 37622-----1960
Frazer, Miss Mary Washington, 302 Cornwall Ave., Nashville, TN 37205---1959
French, Miss Elizabeth, 3108 Ocoee Trail, N. E., Knoxville, TN 37917---1954
French, Mr. & Mrs. J. B., 3108 Ocoee Trail, N. E., Knoxville, TN 37917---1954
Frings, Dr. Hubert & Mable, 514 College Av., Norman, OK 73069------1970
Fugate, Mr. John B., 509 Ingleside Ave., Athens, TN 37303----------1970
Fuller, Mr. Earl J., 5480 S. Angela Lane, Memphis, TN 38117--------1959
Fuqua, Dr. & Mrs. W. G., Rt #7, Columbia, TN 38401-----------------1962

Gallaher, Mr. William T., Rt 18, Knoxville, TN 37921---------------1970
Ganier, Mrs. Albert F., 2112 Woodlawn Dr., Nashville, TN 37212-----1935
Gant, Mrs. J. Norwood, 884 Robertson Academy Rd., Nashville, TN 37220---1965
Gant, Mr. Norwood, Jr., 884 Robertson Academy Rd., Nashville, TN 37220---1965
Ga t, Mr. & Mrs. King, Rt #8, Greeneville, TN 37743----------------1962
Garcelon, Mr. & Mrs. Merrell, 806 Kimbrough Towers, 172 Kimbrough Place, Memphis, TN 38104--1966
Garlinghouse, Mrs. H. C., 1183 C Claymore Dr., Marietta, GA 30060--1957
Gaston, Mrs. Emmet L., Jr., 316 W. Main St., Lebanon, TN 37087-----1957
Geren, Miss Genevieve, 220 N. McLean #1, Memphis, TN 38112---------1950
Gevers, Mr. Carl M., 5511 Dayton Blvd., Chattanooga, TN 37415------1963
Gift, Mr. Edgar, 4514 Mitchell Rd., Kingsport, TN 37664------------1952
Gilreath, Mrs. S. B., 110 Greenlawn Dr., Lebanon, TN 37087---------1967
Gillespie, Mrs. E. C., 749 Lancaster Rd., Augusta, GA 30904--------1958
Goodpasture, Dr. Katherine, 3407 Hopkins Lane, Nashville, TN 37215--1941
Gould, Mrs. Clarence P., 724 Largo Vista Rd., Concord, TN 37720----1969
Graves, Mr. Jimmie, 108 Oneida Lane, Oak Ridge, TN 37830----------1969
Gray, Mr. Roland, 1386 Court Ave., No. 106, Memphis, TN 38104------1970
Green, Miss Martha, 1021 Delmas Ave., Nashville, TN 37216----------1968
Greenfield, Mr. Steve, 186 Brenda Lane, Antioch, TN 37013----------1965
Greever, Mr. C. E., Star Route, Murfreesboro, TN 37130-------------1970
Grigsby, Mr. Maurice E., 6425 Bob Varner Rd., Knoxville, TN 37918--1966
Grimes, Mr. Samuel A., Sr., 4727 Peachtree Circle E., Jacksonville, FL 32205--1962
Grimm, Mr. & Mrs. Billy C., 5519 Melvin Rd., Memphis, TN 38117-----1967
Groce, Mr. & Mrs. A. Ben, 500 Lynwood Blvd., Nashville, TN 37205---1961

Hagen, Miss Virginia, 2418 Kirkland Place, Apt. B-6, Nashville, TN 37212---1961
Haile, Mrs. James, P. O. Box 245, Cookeville, TN 38501-------------1958
Hall, Mr. Melvin G., Rt 2, Dayton, TN 37321------------------------1969
Hancock, Mr. James W., Rt #1, Princeton Road, Madisonville, KY 42431---1946
Hanebrink, Dr. Earl L., Box 67, Arkansas State University, State College, AR 72467--1968
Hanson, Mr. Newton, Box 565, Bruce, MS 38915-----------------------1955
Harbert, Miss Ann, 184 Windover Cove, Memphis, TN 38111------------1958
Hardin, Mr. & Mrs. William C., 634 West "D" St., Elizabethton, TN 37643--1969

Hardman, Mrs. Joel S., 1129 Glendale Lane, Nashville, TN 37204-----1966
Harm, Mr. Ray, Chenoa, KY 40925------------------------------------1969
Harshaw, Mr. Roger, 462 Rural Hill Rd., Nashville, TN 37217--------1968
Hassler, Mr. & Mrs. John D., Box 1, Byrdstown, TN 38549------------1967
Hay, Dr. Sam, 722 Cherokee Court, Murfreesboro, TN 37130-----------1970
Hayes, Mrs. McGavock, 822 Forest Acres Dr., Nashville, TN 37220----1970
Hayes, Dr. Wayland J., 223 Lauderdale Rd., Nashville, TN 37205-----1930
Haynes, Mrs. W. D., 1014 N. Maple St., Murfreesboro, TN 37130------1970
Hendren, Mrs. Adrian C., Box 87, Belmont, NC 28012-----------------1959
Henry, Mr. Earl, Jr., 436 Westview Ave., Nashville, TN 37205-------1967
Herbert, Mr. & Mrs. John S., 611 Lynnbrook Rd., Nashville, TN 37215-1960
Herndon, Mrs. Lee R., Rt. #6, Elizabethton, TN 37643---------------1943
Herron, Mrs. A. B., Route 2, Brentwood, TN 37027-------------------1967
Hervey, Mr. George, 2103 Copper Hill Cove, Memphis, TN 38128-------1969
Hettish, Mr. & Mrs. J. Robert, 1018 Lawndale Dr., Murfreesboro, TN 37130--1967
Hicks, Miss Dorothy, A-3 Warner Park Apt., Nashville, TN 37205-----1969
High, Mr. Raymond D., Box 525, Cookeville, TN 38501----------------1968
Hilton, Miss Esther A., 322 Park St., Bristol, VA 24201------------1950
Hinds, Mr. Roy T., Rickman, TN 38580-------------------------------1958
Hite, Mrs. William S., 2612 Barton Ave., Nashville, TN 37212-------1963
Hobbs, Mrs. Roy K., 730 West Main St., Lebanon, TN 37087-----------1953
Hodgson, Mr. & Mrs. H. C., Rt. 1, Box 230, Old Hickory, TN 37138----1969
Holland, Dr. Frank R., Andersonville, TN 37705---------------------1968
Hollister, Dr. Paul, 1228 Virginia Ave., Cookeville, TN 38501------1958
Hollister, Dr. & Mrs. Robert M., 316 Battle Ave., Franklin, TN 37064---1966
Holmes, Mr. Robert, Director, Bays Mountain Park, City Hall, Kingsport, TN 37660---1969
Horton, Dr. George, University of Tennessee, Martin Branch, Martin, TN 38237---1963
Howard, Dr. & Mrs. M. S. 224 S. Tarver Ave., Lebanon, TN 37087-----1968
Howell, Dr. & Mrs. Joseph C., Dept. of Zoology, University of Tennessee, Knoxville, TN 37916-------------------------------1947
Howerton, Mr. & Mrs. E. D., 433 Grayson Dr., Nashville, TN 37205---1970
Hoyle, Miss Susan, 7923 Cortland Dr., Knoxville, TN 37919----------1965
Hudson, Mr. & Mrs. Jack, 310 Lattawoods, Dyersburg, TN 38024-------1966
Hughes, Mr. & Mrs. O. M., Rt. 1, Shackle Island Rd., Hendersonville, TN 37075-------------------------------------1966
Hunter, Mr. R. E., 2002 Greenland Dr., Murfreesboro, TN 37130------1970
Hurley, Mr. Len, 484 Cherokee Blvd., Knoxville, TN 37919-----------1969

Imhof, Mr. Thomas A., 1036 Pike Rd., Birmingham, AL 35218----------1949

Jackson, Mr. Greg, 2748 Acton Rd., Birmingham, AL 35216------------1970
Jackson, Miss Louise, 5037 Montclair Dr., Nashville, TN 37211------1964
Jacobson, Mr. Daniel R., Box 6, Wildwood, GA 30757-----------------1970
James, Mr. Bill, 1812 Phillips Place, Charleston, IL 61920---------1969
James, Mrs. C. E., 2150 Washington Ave., Memphis, TN 38104---------1958
Jamison, Mrs. T. H., 286 Sherry Circle, Gallatin, TN 37066---------1968
Jessup, Mrs. Lee C., 3313 Hobbs Rd., Nashville, TN 37215-----------1959
Johnson, Mrs. Amy, 318 E. Sixth St., Cookeville, TN 38501----------1958
Johnson, Mrs. David, Rt. 3, Cloverdale Dr., Brentwood, TN 37027----1970
Johnson, Dr. Lee R., 158 Windover Rd., #4, Memphis, TN 38111-------1970
Johnson, Mr. & Mrs. William M., 2815 Riverside Dr., Knoxville, TN 37914=---1926
Jones, Mr. & Mrs. Arthur H., 207 Rainbow Dr., Lookout Mtn. TN 37350 -1970
Jones, Mrs. Carl A., 806 Hillrise Blvd., Johnson City, TN 37601----1966
Jones, Mr. & Mrs. J. P., 1812 21st Ave., South, Nashville, TN 37208---1952
Jones, Mr. William, P. O. Box 142A, Tennessee Technical University, Cookeville, TN 38501---1966
Jones, Mrs. William R., 726 Cherokee Court, Murfreesboro, TN 37130--1970
Jordan, Col. Frank G., 3610 Hampton Ave., Nashville, TN 37215------1958
Justice, Mr. Robert, 104 N. Braden St., Lebanon, TN 37087----------1970

Kaurez, Mr. Harry, 466 Vaughn St., Memphis, TN 38122---------------1967
Keeton, Mr. Luther F., 80 Eastland Dr., Memphis, TN 38111----------1940
Keffer, Mr. Ralph E., 2307 Lakeview Dr., Johnson City, TN 37601----1970
Killeffer, Miss Elizabeth, 2116 Holly Lane, Cookeville, TN 38501---1961
King, Mrs. P. Glenn, 604 Iris Dr., Tullahoma, TN 37388-------------1967
Knauth, Mrs. Herman G., 4321 Brush Hall Rd., Nashville, TN 37216---1955

Knight, Mrs. E. B., 1222 N. Dixie Ave., Cookeville, TN 38501-------1958
Koella, Mr. & Mrs. Jon A., 522 Sycamore St., Morristown, TN 37814--1967
Koss, Mrs. Edward A., 117 Oak Hill Dr., Lebanon, TN 37087----------1970
Kramer, Dr. & Mrs. Lee F., Goodlettsville, TN 37072----------------1966
Krause, Mr. Kurt, 605 Kyle Ave., Lookout Mtn., TN 37350------------1961

Lacy, Miss Beth, 3129 McClure Lane S.E., Knoxville, TN 37920-------1955
Lamb, Mrs. John S., Lake Road, Dyersburg, TN 38024-----------------1963
Langridge, Mr. Howard P., 1421 W. Ocean Ave., Lantana, FL 33462----1956
Lawhon, Mr. & Mrs. Bill, Jr., Taliwa Court Apts., #125 B,
   Knoxville, TN 37920---1966
Lawrence, Mrs. J. W., 105 West End Heights, Lebanon, TN 37087------1968
Leggett, Mr. Kenneth, P. O. Box 16, Pinconning, MI 48650-----------1967
Lewis, Miss Helen K., 345 East Drive, Oak Ridge, TN 37830----------1962
Lilly, Mr. Lindsey, 2731 Cosmos Dr., N. E., Atlanta, GA 30329------1970
Lilly, Mr. Mike, Talge Hall, Box 256, Collegedale, TN 37315--------1969
Lindamood, Mr. & Mrs. William, 541 Cates St., Tiptonville, TN 38257-1965
Loomis, Mrs. C. C., 800 Park St., Bristol, VA 24201----------------1950
Lowe, Sara, Rt. 1, Rockvale, TN 37153------------------------------1970
Lowery, Dr. George H., Jr., 6255 Chandler Dr.,
   Baton Rouge, LA 70808---1937
Lowry, Mr. & Mrs. Charles J., Lowry Hills Rd., Bristol, VA 24201---1969
Luckadon, Mrs. T. R., 137 McKellar Dr., Tullahoma, TN 37388--------1970
Luther, Mrs. Dorothy, 4515 Marcy Lane, Apt. 239,
   Indianapolis, IN 46205--1965
Lynn, Mrs. Paul, 1302 N. Tennessee Blvd., Murfreesboro, TN 37130---1970
Lynn, Mrs. R. E., Rt. #3, Cato Rd., Nashville, TN 37218------------1951

MacMillan, Mrs. Robert D., 4511 Harpeth Hill Drive,
   Nashville, TN 37215---1965
Macon, Mr. & Mrs. Hershel, 3425 Timberlake Rd., Knoxville, TN 37920-1955
Manley, Mr. & Mrs. Leon W., P. O. Box 16218, Memphis, TN 38116-----1961
Mann, Mrs. Margaret Louise, 2189 Riverview Dr., Nashville, TN 37214-1966
Manning, Mr. & Mrs. Don, Rt. 1, Old Paris Highway,
   McKenzie, TN 38201--1970
Marcrum, Miss Cheryl L., 5528 Southwood Dr., Memphis, TN 38117-----1970
Markham, Mrs. Frank, Box 171, Tiptonville, TN 38257----------------1965
Martin, Dr. Margaret P., 1366 Selby Ave., St. Paul, MN 55104-------1958
Maslowski, Mr. Karl H., 1034 Maycliff Place, Cincinnati, OH 45230--1933
Massey, Mr. & Mrs. Chester A., Jr., 6509 Orchard Road,
   Knoxville, TN 37919---1970
May, Mr. Roby D., Jr., 611 N. Main St., Elizabethton, TN 37643-----1956
McCamey, Dr. Franklin, Jr., 3854 Crawford Rd., Dryden, MI 48428----1931
McClanahan, Mr. & Mrs. Harvey P., 468 Tara Trail N.W.,
   Atlanta, GA 30327---1964
McClelland, Mrs. Charles W., Glenwood Rd., Bristol, TN 37622-------1966
McCrary, Mrs. John W., 118 Jefferson Dr., Bristol, VA 24201--------1957
McCrary, Mrs. W. L., Box 57, Woodbury, TN 37190--------------------1965
McFarland, Mrs. Jerry, 308 E. Spring St., Lebanon, TN 37087--------1967
McFarland, Dr. & Mrs. Sam B., 242 East Spring St.,
   Lebanon, TN 37087---1966
McFarlin, Mr. L. L., 1011 Ewing St., Murfreesboro, TN 37130--------1970
McGee, Mr. Sanford, P. O. Box 54, Beersheba Springs, TN 37305------1970
McGee, Mr. & Mrs. Sidney, Tennessee Tech. University,
   Cookeville, TN 38501--1958
McGowan, Mr. & Mrs. George, 108 Darwin Lane, Oak Ridge, TN 37830---1958
McGowan, Mr. & Mrs. Robert, Rt. 3, Box 86, Collierville, TN 38017--1965
McLeod, Miss Helena, D-2 Belle Meade Terrace Apts.,
   Nashville, TN 37205---1967
McMillan, Mr. Chris, 2761 Lindsay Place, Knoxville, TN 37919-------1968
McMillan, Mrs. Ruth, Rt. #2, Lascassas, TN 37085-------------------1970
McNeil, Mrs. Guy, 712 Piedmont Ave., Bristol, VA 24201-------------1959
McPeak, Mr. John David, Rt. 5, Box 207, Bristol, TN 37620----------1967
McPherson, Mr. Charles E., 7061 Riverdale Road,
   Germantown, TN 38038--1951
McWhorter, Mrs. J. H., Rt. 2, Ravenden, AR 72459-------------------1947
Meadors, Mr. & Mrs. Howard, 109 Cleveland Rd., Rossville, GA 30741--1958
Meeks, Dr. & Mrs. E. A., 1411 N. Roan St., Johnson City, TN 37601---1964
Mengel, Mr. & Mrs. J. T., 3626 Kingston Place, Knoxville, TN 37920--1955
Merritt, Mrs. Dixon, Rt. #6, Lebanon, TN 37087---------------------1950
Miller, Miss Clarice, 1115 N. Church St., Murfreesboro, TN 37130---1970

Miller, Mr. & Mrs. George, 573 Croley Dr., Nashville, TN 37209-----1969
Miller, Mr. & Mrs. Herbert, 801 Piedmont St., Bristol, VA 24201----1958
Miller, Mr. & Mrs. Max, Sullins College, Bristol, VA 24201---------1966
Mitchell, Mr. Harold D., 238 West Royal Parkway,
Williamsville, NY 14221---1946
Mitchell, Mrs. Lottie, 514 Brentlawn Dr., Nashville, TN 37220------1959
Monk, Mr. Harry C., #5 Westminister Apt., 2013 Capers Ave.,
Nashville, TN 37212---1919
Monroe, Dr. Burt L., Jr., Dept. of Biology, University of Louisville,
Louisville, KY 40208--1969
Monroe, Mr. & Mrs. Robert A., 3636 Taliluna Ave., Apt. 301,
Knoxville, TN 37919---1938
Moore, Mrs. C. E., 439 Patterson St., Memphis, TN 38111------------1931
Moore, Mrs. J. T., RFD #2, Algood, TN 38540------------------------1958
Moore, Miss Julia I., 106 Darwin Lane, Oak Ridge, TN 37830---------1949
Moore, Mrs. Myriam P., 101 Columbia Ave., Lynchburg, VA 24503------1964
Moore, Miss Nelle, 275 Palisade Ave., Memphis, TN 38111------------1945
Moore, Mrs. Richard, Reel Heights, Oak Ridge, TN 37830-------------1966
Morehead, Dr. M. R., 77 Davis St., Cookeville, TN 38501------------1959
Morgan, Mr. & Mrs. John T., Sr., Rt. 1, Box 400, Hermitage Harbor,
Old Hickory, TN 37138---1964
Moss, Dr. & Mrs. Joe, 2020 Castleman Dr., Nashville, TN 37215------1966
Mountfort, Miss Penelope, 4313 Glen Eden Dr., Nashville, TN 37205---1947
Mulholland, Mr. & Mrs. Dan M., 1142 Kingspark Rd., Memphis, TN
38117---1967
Murphy, Mrs. Charles B., Rt. 2, Brentwood, TN 37027----------------1964
Mynatt, Mrs. E. W., RFD 13, Bell Rd., Knoxville, TN 37918----------1965

Nagel, Dr. Jerry W., 1603 Chickees St., Johnson City, TN 37601-----1970
Nevius, Mr. & Mrs. Richard, Rt. #3, Greeneville, TN 37743----1945, 1937
Nichols, Mrs. Robert C., 4621 Franklin Rd., Nashville, TN 37220----1967
Nickell, Dr. Walter P., Rt. 5, Box 175-B, Clinton, TN 37716--------1969
Noland, Miss Edith, 3544 Crestridge Dr., Nashville, TN 37204-------1966
Nolan, Mrs. Sara, 2017 Sweetbriar Ave., Nashville, TN 37212--------1970
Norman, Mr. James L., 502 N. 14th., Muskogee, OK 74401-------------1953
Norris, Dr. & Mrs. Raymond C., 4021 Sunnybrook Dr.,
Nashville, TN 37205---1965
Norwood, Mr. Joseph R., 1329 Goodwin Ave., Charlotte, NC 28205-----1955
Nunnally, Miss Louise, 2701 Fairmont Blvd., Knoxville, TN 37917----1965
Nunley, Mr. & Mrs. H. W., Rt. 3, Bluff City, TN 37618--------------1950

Odom, Mrs. E. P., 1700 E. Main St., Murfreesboro, TN 37130---------1970
Oelke, Mr. & Mrs. W. C., 1169 Keowee, Apt. F2, Knoxville, TN 37919--1970
Ogden, Mr. & Mrs. John C., Box 279, Everglades National Park,
Homestead, FL 33030---------------------------------------1952,1970
Olson, Mr. & Mrs. Earl F., Box 37, Norris, TN 37828----------------1955
O'Neil, Dr. A. W., P. O. Box 586, Falfurrias, TX 78355-------------1961
Orleans, Mrs. Jane, 1218 Ford Place, Knoxville, TN 37920-----------1949
Ottenfeld, Mr. & Mrs. C. T., Brookwood, Rt. 5, Bristol, TN 37622---1966
Overton, Mrs. E. E., 3316 Bunker Hill Dr., Knoxville, TN 37920-----1947
Owen, Mr. & Mrs. J. B., 2930 North Hills, Blvd., Knoxville, TN,
37917---1947
Owen, Mrs. Edward A., P. O. Box 144, Williston, TN 38076-----------1949
Owen, Mrs. Paul C., 7510 Highway 72, Germantown, TN 38038----------1950

Paige, Mrs. Louise, 1937 E. McLemore Ave., Memphis, TN 38114-------1967
Parish, Mr. Eugene T., 2393 Millbrook Ave., Memphis, TN 38127------1967
Parks, Mrs. Beulah, 313 McBrien Rd., Chattanooga, TN 37411---------1968
Parmer, Mr. & Mrs. Henry E., 3800 Richland Ave.,
Nashville, TN 37205---1955
Patrick, Mr. & Mrs. Oscar, 4641 Villa Green Dr.,
Nashville, TN 37215---1969
Patterson, Mr. & Mrs. David E., Olive Hill, TN 38475---------------1964
Patterson, Mr. J. Hunter, 1409 Edgewood Dr., Dublin, GA 31021------1970
Patterson, Mr. Paul, Olive Hill, TN 38475--------------------------1970
Patton, Dr. John, Box 60, M.T.S.U., Murfreesboro, TN 37130---------1970
Paul, Mr. & Mrs. Byron, 203 Oakhill Dr., Lebanon, TN 37087---------1966
Payne, Mr. George, Jr., 6643 Monmouth Dr., Memphis, TN 38117-------1970
Peake, Mr. & Mrs. Richard, Jr., Box 28, Wise, VA 24293-------------1964
Pfitzer, Mr. Donald W., U. S. Fish & Wildlife Service, Peachtree-
Seventh Bldg., Atlanta, GA 30323------------------------------1970

Pfitzer, Mr. & Mrs. E. A., 1640 Rossville Blvd., Chattanooga, TN 37408--------------------1969
Pflug, Miss Marguerite, King College, Bristol, TN 37622------------1950
Phelps, Mrs. Elizabeth, Phelps Industries, Skyland, NC 28776-------1963
Phillips, Dr. Allan R., Apartado 19-138, Mexico, D.F. Mexico--------1943
Pitts, Mr. T. David, Biology Dept., University of Tennessee at Martin, Martin, TN 38237--------------------1965
Pitts, Mrs. Marion, 136 Beaumont, Martin, TN 38237-----------------1970
Post, Mr. William, Jr., 1719 Nottingham Dr., Raleigh, NC 27607-----1968
Powell, Mr. Albert L., Rt. 1, Maceo, KY 42355----------------------1934
Price, Mrs. David, Jr., 1954 Old Hickory Blvd., Brentwood, TN 37027-1970
Puckett, Mr. & Mrs. E. Powell, 112 Amherst Lane, Oak Ridge, TN 37830--------------------1969
Puryear, Mr. & Mrs. W. A., Old Smyra Rd., Brentwood, TN 37027------1958

Ragland, Miss Ella H., 275 Palisades St., Memphis, TN 38111--------1945
Ragland, Mr. Robert, Box 544, Murfreesboro, TN 37130---------------1970
Railford, Mr. & Mrs. Walker, Blue Grass Dr., Hendersonville, TN 37075--------------------1970
Ramsey, Mrs. Thomas R., Jr., 928 Clearwood Ave., Kingsport, TN 37660--------------------1970
Range, Mr. Peter, 514 Laurel Ave., Johnson City, TN 37601----------1969
Rankin, Mr. & Mrs. F. Earle, Box 172, Pigeon Forge, TN 37862-------1970
Restivo, Mr. Ernie, 5880 McInness, Memphis, TN 38117---------------1968
Reynolds, Mr. & Mrs. A. E., 807 Maple, Bristol, TN 37622-----------1958
Rice, Mrs. James L., Rt. 2, Brentwood, TN 37027--------------------1969
Richmond, Mr. Miser, Box 48 A, Tennessee Tech., Cookeville, TN 38501--------------------1941
Ridley, Mrs. Campbell, Mt. Pleasant Pike, Columbia, TN 38401-------1965
Riggins, Mr. & Mrs. John, 5615 Brookwood Place, Nashville, TN 37205-1969
Rini, Mr. S. Jack, 740 W. Clover Dr., Memphis, TN 38117------------1954
Rion, Mr. & Mrs. Wm. C., 713 S. Dickerson Rd., Goodlettsville, TN 37072--------------------1963
Robison, Mr. Henry W., South University Place, Unit 39, Apt. 11, Stillwater, OK 74074--------------------1968
Rosen, Dr. & Mrs. Lawrence, 3225 Carlisle Rd., Birmingham, AL 35213-1962
Ross, Mr. Hollis T., West Lawn, Lewisburg, PA 17837-----------------1933
Rowell, Mr. Brent, 2227 Edgemont Ave., Bristol, TN 37622-----------1970
Rue, Miss Elizabeth Waitt, Pi Beta Phi Staff House, Gatlinburg, TN 37738--------------------1960
Ryder, Mr. & Mrs. Sterling C., 129 E. Tenn. Ave., Oak Ridge, TN 37230--------------------1970

Sanders, Mr. & Mrs. Kenneth B., Old Sevierville Pike, Rt. 9, Knoxville, TN 37920--------------------1955
Satterfield, Mr. Stephen, RFD #1, Box 265, Luttrell, TN 37779------1966
Sawyer, Mrs. Herman, 604 Estes Ave., Nashville, TN 37215-----------1962
Schiller, Mrs. Henry A., 3572 Allendale Rd., Memphis, TN 38111-----1956
Schreiber, Mr. & Mrs. Edwin D., Sr., 3518 Pleasant Valley Rd., Nashville, TN 37204--------------------1963
Schroeder, Mr. Alan B., 14661 Parkwood Dr., Grand Haven, MI 49417---1969
Schuerman, Mr. & Mrs. Max, 3906 Woodmont Lane, Nashville, TN 37215--1961
Schwamm, Mr. & Mrs., 4208 McCampbell Lane, Knoxville, TN 37918-----1969
Scott, Mr. E. E., RFD #1, Nickelsville, VA 24271-------------------1966
Scott, Mr. Frederic R., 115 Kennondale Lane, Richmond, VA 23226----1955
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OBSERVATIONS OF CERTAIN BIRDS

By James M. Campbell and J. C. Howell

Observations of Certain Birds in Campbell County — In the course of field trips made as a part of a study of the birds of Campbell County certain observations were made in late May, June and July, 1970 which seem worth publishing. We expect these notes to be followed by others as we learn more of the birds of this county. Scientific names of birds are from the A.O.U. Check-list (1957) and those of plants are from Shanks and Sharp (1947). Elevations and place names are from the U.S.G.S. quadrangle maps.

On 27 June we saw a male Sharp-shinned Hawk (*Accipiter striatus*) fly into a grove of small pines. While we searched for its nest both parents were briefly glimpsed a few times and some rather soft, almost melodious, cackling notes were heard. The nest was located some 20 to 25 feet up in a 40-foot, thickset pine (*Pinus virginiana*). Three young standing on the edge of the nest showed considerable down. Two of the young flew in descending, awkward flight to trees about 15 and 25 feet from the nest when one of us (J. M. C.) climbed 10 feet up the nest tree. The nest was on the crest of a ridge of Cross Mountain one mile east of Grissel Knob at an altitude of 2,840 feet.

In the course of a Breeding Bird Survey count on 7 June, made by J. C. Howell and Frances Olson, a Red-shouldered Hawk (*Buteo lineatus*) was heard calling. The requirements of the survey prevented a search to see the bird. The hawk was heard again (by J. C. H.) on 11 June, but was not seen. A Blue Jay heard near the calling hawk suggested that a jay might have been imitating the hawk (Brown and Amadon, 1968). On 21 June we (J. M. C. and J. C. H.) again heard the hawk. A hike to the crest of a nearby hill resulted in our getting a clear view the hawk. It was in juvenile plumage and circled overhead a number of times about 100 feet above us. This bird called frequently while we were within earshot and responded readily to imitations of its call. The location was The Lone (Knob) three miles north of Pioneer above Elk Fork Creek at an altitude of about 1,350 feet.

A Red-shouldered Hawk (or possibly two) was heard calling from two locations about 0.25 mile apart on the Tennessee-Kentucky line 2.5 miles (by road) from the Highcliff bridge on 5 July. We were unable to see this hawk. Both this Red-shoulder and the one observed near Pioneer were in relatively flat valleys in which there was a mixture of pastures, crop lands and wooded areas bordered by forested hills or mountains. While one of the sites from which this hawk called was very close to the Tennessee line, we believe it probable that both of these places should be assigned to Kentucky.

At the Pioneer stop on the 7 June count the "chebec" song of a Least Flycatcher (*Empidonax minimus*) was heard repeatedly. The bird sounded as though it were only 75 feet away, but it was not seen. Returning on 11 June the flycatcher was neither seen or heard (J. C. H.) However, on 21 June we (J. M. C. and J. C. H.) heard the bird at intervals for about 30 minutes before we were able to see it and examine its characteristic eye ring and wing bars. During our observations the bird was briefly seen flying into a thicket where the begging notes of young birds could be heard. We could not be certain that the young birds we heard were Least Flycatchers. No nest resembling that of a Least Flycatcher was found. The altitude here was 1,540 feet. Mengle (1965) rejects the single possible summer record of this species for Kentucky.

On 31 May a song thought (J. C. H.) to be that of a Swainson's Warbler (*Limnothlypis swainsonii*) was heard near state highway 63 in Smith Cove at Rector Branch close to the Scott County boundary. It sang regularly in a rather open thicket of bushes, including a few rhododendron, on a gently sloping area near a tiny stream about 100 feet from Rector Branch. On 11 June this bird was located by its song by J. C. H. Eventually the bird alighted some 40 feet away at eye level facing the observer. The breast of the bird was devoid of markings. It remained in full view in good light for about a minute and sang twice. On 21 June we heard the bird sing about 10 times, but were unable to see it. At no time in these observations was a bird that might have been a mate seen or heard. During these three observation periods this bird sang from places with an extreme distance of about a thousand feet along Rector Branch at an altitude of about 1,540 feet. Mengel (1965) reports the species from Black Mountain, Harlan County, in early July and from other areas in the Cumberland Mountains of eastern Kentucky.

A female Cerulean Warbler (*Dendroica cerulea*) was observed on 21 June sitting on a nest 30 feet up in a tulip tree (*Liriodendron tulipifera*). As we examined the nest a male of this species gave frequent chip notes from 50 feet away. The nest was on top of an almost horizontal branch supported in part by small living twigs and located above a gravel road. The outside of the nest was of dark brown strips of bark. The nest site was on a south slope of Cross Mountain at an altitude of about 2,200 feet beside the east branch of Davids Creek, some two miles (airline) west southwest of Caryville. Almost mature and largely undisturbed deciduous forest grew on the steep slope about the nest. The commonness of this species in this region is attested by the hearing of 15 singing males along seven miles of this mountain road during the 7 June count.

On 27 June we heard a softly singing male Chestnut-sided Warbler (*Dendroica pensylvanica*) which carried an insect larva in its bill. A few minutes later this bird flew down into some nearby bushes. A brief search flushed a female from a nest located 20 inches up in a brier (*Rubus sp.*)

beneath a five-foot, slender Sour Gum (*Nyssa sylvatica*) shoot. In the nest were three young four or five days old and an infertile egg. The side of the nest was so loosely constructed that it could be seen through. The nest site was beside a road on the crest of a ridge of Cross Mountain approximately one mile east of Grissel Knob at an altitude of 2,820 feet. Much bare ground was present along this ridge crest as a consequence of coal strip mining operations completed in the vicinity of the nest site in recent years.

Along the above road in about a mile and a half at altitudes of from 2,800 to 3,040 feet in a disturbed area of thickets and surrounding forest edge, we heard five singing males. Stupka (1963) reports this species as being a common summer resident above 3,000 feet in the Great Smoky Mountains National Park and as nesting down to 2,000 feet 20 miles south of the Park. Mengel (1965) reports this species to be a common summer resident above 3,200 feet on Black Mountain, Harlan Co., Kentucky.

A male Baltimore Oriole (*Icterus galbula*) was carefully observed by us in an old apple orchard 2 miles (by road) north of Pioneer near the New Canaan Church on 21 June. The altitude was about 1,220 feet. The bird both sang and chattered; a brief search failed to locate a nest or another bird of this species.

LITERATURE CITED

American Ornithologists' Union. 1957. *The Check-list of North American Birds.*

Brown, L. and D. Amadon. 1968. *Eagles, Hawks and Falcons of the World.*

Mengel, R. 1965. *The Birds of Kentucky.*

Shanks, R. E. and A. J. Sharp. 1947. *Summer Key to the Trees of Eastern Tennessee.*

Stupka, A. 1963. *Notes on the Birds of the Great Smoky Mountains National Park.*

U. S. Geological Survey Quadrangle Maps: Block (1952), Jellico East (Tennessee-Kentucky) (1953), and Pioneer (1952) Quadrangles.

15 Hedgewood Dr., Knoxville 37918 and Dept of Zoology and Entomology, University of Tennessee, Knoxville 37916.

ANNOUNCEMENT

JOINT ANNUAL MEETING
of
TENNESSEE ORNITHOLOGICAL SOCIETY
with
KENTUCKY ORNITHOLOGICAL SOCIETY
at
MAMMOTH CAVE, KENTUCKY
30 APRIL and 1 and 2 MAY 1971

Plans are incomplete at this time, however, Mr. Albert F. Ganier, founder and curator of the Tennessee Ornithological Society and who was instrumental in the founding of the Kentucky Orithological Society, will be a featured speaker at this meeting.

ROUND TABLE NOTES

SPRING SIGHTING OF AMERICAN AVOCETS IN SUMNER COUNTY — At about 17:25 on 30 April 1970 while making a routine inspection of the ash disposal lines at the TVA Gallatin Steam Plant, I saw three large shore birds that were completely unfamiliar to me. I stopped and got out of the car about 75 yards from the birds. One bird was sitting on an "ash bar" at the edge of the water, the other two were standing in shallow water a few feet from the edge. The birds appeared to be resting. They made no movement other than occasionally turning their heads. I made a rough sketch of the birds and made the following notes: head and neck bright rusty, darkest on crown, palest on lower neck; wings and body black and white, striped front to rear; breast and belly white; tail, black; legs, dark; impression of a long, dark beak but unable to see it clearly at this distance and without binoculars.

I returned to the steam plant and called my wife. She checked Peterson's "*Field Guide to the Birds*" and "*Birds of America*" and decided that American Avocets (*Recurvirostra americana*) were the only birds that fit my description. However, she suggested that I check again on the beaks.

I borrowed a pair of 7x50 binoculars from TVA Public Safety Service and returned to the ash disposal pond at 19:15. With the binoculars, I could easily see the long, dark upturned beak and, also, a pale patch of feathers at the base of the beak. I estimated the height of the birds as about 18 inches. The legs were slaty. They were still at rest but all three were standing at this time. One bird was facing away from me at this time and the back pattern consisted of a white triangle at the base of the neck, then a black V extending down the edge of the wings, a white V, then another black V. I observed the birds for 15 minutes this time, leaving the site at 19:30. Skies were clear and light was good on both occasions.

The ash disposal pond in which the birds were resting is, roughly, a long triangle. The base, running NE x SW is approximately 250 yards long. The sides, running approximately N & S and NE x SW are approximately 800 yards long. The pond is surrounded by a dyke made of ash and cinders, the dyke being approximately 25 feet high on the SW side. Old Hickory Lake borders the SW side. There are a few drowned willow and cottonwood tops inside the pond and scattered cottonwood and willows around it. The pond is a settling basin for slag and ash and has a delta, or bar, of ash extending out into the water approximately half way between the base and apex on the NE side. The American Avocets were resting on the edge of this bar. Ash and slag enter the pond through a 10 inch pipe about 8 feet above the level of the bar. However, nothing was being discharged into the pond at this time.

I made a second call to my wife to tell her the birds were definitely American Avocets. Meanwhile, she had checked H. E. Parmer's "*Birds of the Nashville Area*" and found that there was only one previous record in the Nashville area. We felt that other birders should be notified so she called a number of local people and, also, Carol Knauth of Nashville. I made the necessary arrangements to have visitors admitted to the plant grounds at 05:30 the next morning.

At the crack of down, we were met at the steam plant gate by Katherine Goodpasture, Harry Monk, Mike Bierly and Roger Harshaw from Nashville and Dr. and Mrs. James Thomas and Mr. and Mrs. Leland Scott from Gallatin.

I was highly embarrassed to find that the Avocets had "flown the coop."

Subsequent investigation showed that the ash disposal pumps at the steam plant had been changed at 05:00, which resulted in a 10 inch stream of ash and slag-laden water being discharged into the settling basin some 50 to 60 yards from where the American Avocets were resting. I feel that this sudden cascade of water into the immediate vicinity caused the birds to take flight.

Mr. Harry Monk advises me that American Avocets have been reported only seven times prior to this in Tennessee and that this is the first spring sighting.

PAUL CRAWFORD, Route 4, Gallatin, Tennessee 37066.

CLIFF SWALLOWS NESTING IN GRAINGER COUNTY — On 5 June 1970, Maurice Grigsby and I noticed several Cliff Swallows (*Petrochelidon pyrrhonota*) flying around the W. P. Harrell Bridge in Grainger County, Tennessee. From the bank we were able to count about 25 Cliff Swallow nests. On 7 June 1970, Morris Williams, Albert Baugus and I returned to make a more thorough determination of the Cliff Swallow status in Grainger County. On Highway 11 W in Bean Station we counted 30 Cliff Swallow nests under the bridge at Briar Fork Creek embayment on Cherokee Lake. We returned to the W. P. Harrell Bridge and rented a boat. This time we counted 67 nests. At Cherokee Dam we found no nests around the dam itself but found 9 nests under the J. K. Shields Bridge just below Cherokee Dam.

On 20 June 1970, my wife and I checked bridges and culverts along Highway 11W through Grainger County and into Hawkins County. We also checked Highway 25A from its junction with 11W to Morristown, Tennessee. We found 24 nests under the Shields Creek Bridge, 39 nests under a bridge across a small arm of Cherokee Lake two miles further east and 47 nests under another small bridge four miles east of the Shields Creek Bridge. These last three bridges are in the vicinity of Bean Station as was the Briar Fork Creek Bridge. A total of 214 Cliff Swallow nests were found in Grainger County and two nests, which were located on the south end of the J. K. Shields Bridge in Jefferson County.

This is the fourth location that has been reported for nesting Cliff Swallows in East Tennessee. Ben Coffey first reported Cliff Swallows nesting in East Tennessee in the Chattanooga area (*The Migrant* 13:47-48). Adele West summarized the Cliff Swallow status in the Chattanooga area in *The Migrant* 32:37-40. Herndon (*The Migrant* 18:44-45) reported finding 30 Cliff Swallow nests in the Siam Community of Carter County. Also *The Migrant* (in Press) reports the location of 14 nests in western Knox County and two nests in Blount County.

Under most of the bridges in Grainger County there were many old mud rings indicating that the Cliff Swallows had used these sites prior to 1970. We noticed that several of the nests that were in use were in poor condition. On several of the nests there was a thin ring of moist, dark colored mud which had recently been deposited. In one case my wife and I watched one Cliff Swallow collect mud from a near-by mud bank and deposit the mud pellets around a gaping hole in its nest. This one particular run-down nest actually had young in it.

Gary O. Wallace, Department of Zoology, The University of Tennessee, Knoxville 37916.

CLIFF SWALLOWS NESTING IN KNOX COUNTY — Cliff Swallows (*Petrochelidon pyrrhonota*) have been observed as spring (5 April-20 May) and fall (18 Aug.-12 Sept.) migrants in Knox County, Tennessee for many years (Howell, J. C. and Muriel B. Monroe. 1957. "The Birds of Knox County, Tennessee". *Journal of the Tenn. Acad. of Sci.* 32(4):277.)

Noting there were no nesting records of this species for the county many of us have searched in late spring and early summer for the mud nests of this swallow. On the morning of 16 May 1970 these efforts bore success for Jim Campbell, Morris Williams, and me. We located nests both completed and under active construction by Cliff Swallows beneath two bridges approximately three miles apart on Turkey Creek Rd. near Concord in southwest Knox County.

This constitutes the first nesting record of this species for this county.

Both bridges are concrete structures with underframing composed of concrete beams set at right angles to each other. The nests were attached to the underside of the bridges where the supporting beams met forming solid supports on two sides and above. Two nests were observed to be completed, or nearly so, under the bridge at the east end of Turkey Creek Rd., while only one of the four under the bridge at the west end of Turkey Ck. Rd. was completed. The other nests were in various stages of construction with the swallows actively carrying mud from the banks of the nearby pond and lake to the nest sites. The flask-shaped mud nests were about 8 feet above the water.

I photographed the nests under the western bridge on 18 May and found the colony had increased to eight nests. On 20 May the nest construction under the other bridge was checked and found to consist of six nests.

On 23 May, 1970 Dr. and Mrs. James T. Tanner found two additional Cliff Swallow nests along with six nests of the Barn Swallow (*Hirundo rustica*) under the Stock Creek bridge in south-Central Knox County.

Fred J. Alsop, III, Dept. of Zoology and Entomology, University of Tennessee, Knoxville, 37916.

SWAINSON'S WARBLER TOWER CASUALTY—On the morning of 15 October, 1969, after a low overcast night, I found a hatching year

Swainson's Warbler under the Olive Hill micro-wave tower. I froze the bird and sent it to the T.O.S. Curator, Mr. Ganier. He reports that it was a very fat female measuring: length 142 mm., wing chord 68 mm., and tail 49 mm.

While Swainson's Warblers are frequently seen at Memphis and Reelfoot Lake they are very rare in Middle Tennessee, with only two records in Henry Parmer's *Birds of the Nashville Area* (1969 edition).

At the same tower on the same date, eight other birds were collected: 2 Yellow-billed Cuckoos; 1 Tennessee, 2 Chestnut-sided, and 3 Bay-breasted Warblers.

Michael Patterson, Harbert Hills Academy, Savannah 38372.

RED CROSSBILLS AT BASIN SPRING. About noon on 22 November 1969, eight Red Crossbills (*Loxia curvirostra*) flew into Virginia pines (*Pinus virginiana*) at Basin Spring, settling on the cones to feed.

There was opportunity for deliberate observation. Mel Garland and I together identified the crossbills. Attention was first attracted to the birds by a single unfamiliar call note. Brick-red plumaged birds, at least one reddish orangy one and birds with greenish plumage were noted. They had dark unbarred wings and an indefinite watered sort of pattern on the back. Characteristic crossed bills could be resolved when they were silhouetted against the clear blue sky. The birds fed hanging at all angles from the pine cones. They moved from one tree to another, calling in flight.

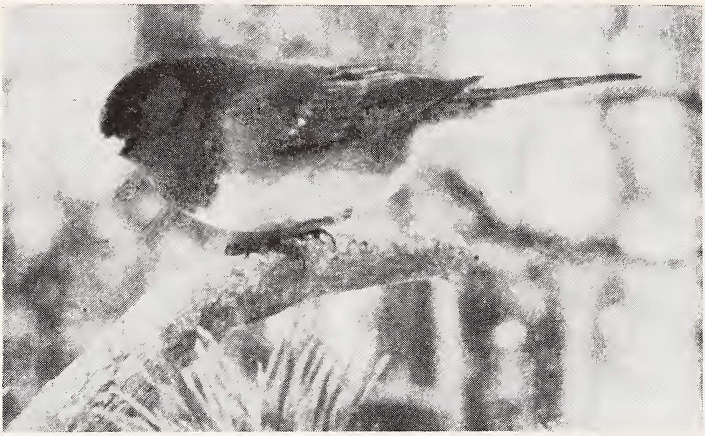
The flock was present from noon until dusk 22 November, and on the following day, 23 November, at least 9 birds were present from 08:00 until dusk. On the second day several people were able to study the birds through binoculars and telescopes. At one time, 5 brick-red individuals were in one binocular field. The birds were not found mid-afternoon of the third day and have not been seen since.

As far as I can determine, this is the first published record of Red Crossbills in Middle Tennessee. Feeding in the same pines with the crossbills and nearby were 3 Red-breasted Nuthatches (*Sitta canadensis*), 2 White-breasted Nuthatches (*Sitta carolinensis*), about 25 Pine Siskins (*Spinus pinus*), a few American Goldfinches (*Spinus tristis*), Golden-crowned Kinglets (*Regulus satrapa*), and Cedar Waxwings (*Bombycilla cedrorum*).

Katherine A. Goodpasture, 3407 Hopkins Lane, Nashville.

OREGON JUNCO IN NASHVILLE — On 7 January 1970 Pauline Miller observed and identified an Oregon Junco (*Junco oreganus*) *feeding* with Slate-colored Juncos (*Junco hyemalis*), Purple Finches (*Carpodacus purpureus*), Pine Siskins (*Spinus pinus*), Field Sparrows (*Spizella pusilla*) and other wintering birds on Croley Drive inside the city of Nashville. Mrs. Miller called other members of TOS to confirm identification and to study this out-of-the-ordinary visitor.

Plumage characters of this junco were so well established no concessions needed to be made on its identification. It had a sharply marked black-appearing head and bib with an easily distinguished hind-neck line between black and tannish black. A like-sharp edge marked the angle between its black bib and buffy side. Its beak was light or pinkish. The Oregon Junco seemed at first wary, it tended to feed somewhat separated from the other birds. It came to feed early in the morning for a short time then retired, returning in 3 or 4 hours to feed again. Eventually it came frequently to a window feeder within 3 feet of people and cameras. It could often be observed on the ground in a hedge row at the side of the yard or could be flushed from a next-door weed patch. It was observed at the feeding station every day from 7 January through 9 March after which it was not recorded.



On 11 February 1970 it was trapped and banded by Katherine Goodpasture. With the bird in hand it was noted that 4 middle coverts had dull whitish tips to the outer vanes and that there was only a faint suggestion of lightness on the tips of greater coverts. These marks gave some pattern to the folded wing but did not make wing bars. Two outer rectrices on both sides were full white; the next inner rectrix on both sides was more than half white. Its wing chord measured 78mm which is not larger than some Slate-colored Juncos. The back was described as being quite tannish; the beak was pinkish with dark upper tip.

To our knowledge this is the first established record of an Oregon Junco for the Nashville area or the central portion of the state.

It is interesting that on 1 March 1970 Amelia Laskey identified an unbanded Oregon Junco in her yard. It fed there long enough for her to study it very carefully with binoculars. A few days later, 11 March 1970, Katherine Goodpasture had an unbanded Oregon Junco feeding at her station. These two stations are about half a mile apart; Mrs. Miller's station is about 6 miles away. On a field trip, 14 March, to the Kingston Springs area 20 to 25 miles west Mrs. Miller saw an Oregon Junco with a large flock of Slate-colored Juncos in a close cropped pasture.

Being aware of very great variation in the amounts of brown, of pinkish and of buffy and in the intensities of black and gray in both *Junco hyemalis* and *Junco oreganus* including the western Slate-colored (*Junco h. cismontanus*) which we see occasionally, we judged the above described junco to be clearly *Junco oreganus.*

Pauline Miller, 573 Croley Drive, Nashville.

Katherine A. Goodpasture, 3407 Hopkins Lane, Nashville.

TENNESSEE ORNITHOLOGICAL SOCIETY
BOARD OF DIRECTORS' MEETING

October 10, 1970

The Board of Directors of the Tennessee Ornithological Society met at 13:15 on Saturday 10 October at the Holiday Hills Resort in Crossville, Tennessee. Fourteen directors were present representing all active chapters with the exception of Murfreesboro and there were about 75 members in all present at this open meeting of the board. The minutes of the previous meeting at Reelfoot Lake in May 1970 were approved as printed in *The Migrant.*

The nominating committee reported that it had not as yet found a nominee for the position of Editor, but was continuing to seek such individual. There was a lengthy discussion of *The Migrant* including its purpose, content, and format. Most of the members and directors present favored the retention of Christmas and Spring counts and the season report within the body of *The Migrant* but there was considerable discussion of "The Season" report and its format with a view toward making it more readable. Several members felt that more articles should be included in *The Migrant* aimed primarily at the interest of the many non-professional "backyard birders" who are members of our society. A number of differing viewpoints were heard but it was felt that final decisions should await the election of the new Editor next May 1971. A motion was made, seconded, and passed directing the Editorial Advisory Committee to study and make recommendations for the consideration of the new Editor concerning ways in which *The Migrant* might be strengthened and improved for the benefit of the total membership of the society.

Dr. Mayfield reported that the North Carolina Society had written him in regard to the possibility of a joint meeting with the Carolina Society as early as May 1971. This of course is not possible because of our commitment to meet jointly with the Kentucky Ornithological Society at that time. This matter was referred to the President-elect and future officers for their consideration.

Because of the presence of nearly 80 members at this fall meeting, it was felt by the board that interest was sufficient to justify the continuation of a fall meeting of the Tennessee Ornithological Society in a moderately convenient location between Crossville, Tennessee and Jackson, Tennessee.

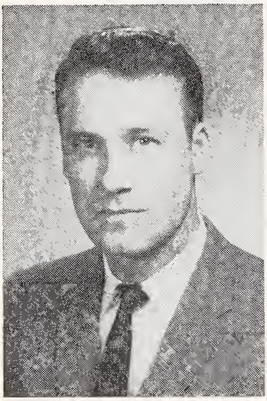
There was a discussion of the June foray for 1971 under the leadership of Mr. Fred Alsop. Final details were left with Mr. Alsop, but the location of the foray was tentatively planned for Campbell County (after Big South Fork of the Cumberland was ruled out as too inaccessible). The second week-end of 10-13 June (Thursday-Sunday) was chosen as the time for the foray.

The meeting was adjourned at about 14:30.

—George R. Mayfield, Jr.

PRESIDENTIAL MESSAGE

I believe it was the concensus of those who attended the Fall meeting at Crossville that this first Fall meeting of the TOS was a success. A number of important issues and future plans were discussed as outlined in the minutes of the Board of Directors, printed elsewhere in this issue. Seventy-eight of our members and fourteen directors from all chapters except one were in attendance. Several excellent papers were presented mostly dealing with the theme of conservation in Tennessee. Particularly important among these were the present court battle to save the wildlife habitat in the Obion bottoms of West Tennessee and the case for saving the Obed River and the Big South Fork of the Cumberland in their free-flowing wild condition ably presented by Bill and Diane Russell, two of the prime movers of the Tennessee Citizen for Wilderness Planning. I urge all of our members to join other such societies devoted to the preservation of wilderness and wildlife habitat in Tennessee and actively pursue this cause.



Plans are progressing well for our 10-13 June, 1971 foray to be held in Campbell County under the direction of Fred Alsop. All interested members are urged to participate and to contact Fred if they have any questions about this event.

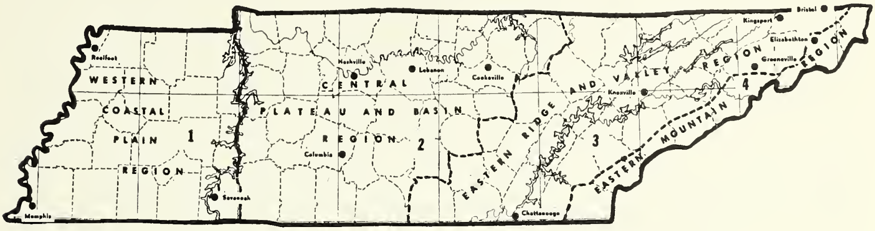
I am sure that many of our members will want to attend our first joint meeting with the Kentucky Society at Mammoth Cave, Ky. 30 April and 1-2 May, 1971. A joint liaison committee is working on plans for this important event headed by Mr. John Ellis of Nashville for the TOS. Among the other features of the program will be our own founder and curator Mr. Albert Ganier, who will speak at the banquet. If by chance you do not receive a mailing of information regarding this meeting, you should make reservations at least one month in advance, if you plan to attend. The Mayfield family looks forward to seeing as many of you as possible at Mammoth Cave.

George R. Mayfield, Maury County Hospital, Columbia, 38401.

—George R. Mayfield, Jr.

THE SEASON

LEE R. HERNDON, *Editor*


Reelfoot
WESTERN COASTAL PLAIN REGION
1
Memphis
Savannah
CENTRAL PLATEAU AND BASIN REGION
2
Nashville
Lebanon
Cookeville
Columbia
EASTERN RIDGE AND VALLEY REGION
3
Knoxville
Chattanooga
Kingsport
Bristol
Elizabethton
Greeneville
EASTERN MOUNTAIN REGION
4

The temperature was about normal for the period. Rainfall was excessive for both August and October, the latter month usually being the driest of the year. The October rainfall as recorded by TVA was 5.3 inches, average for the state. Normal rainfall for October is about half that amount. This was the wettest October since 1949.

The draw-down of TVA lakes was earlier and greater than normal because of excessive electrical power demands, due to a coal shortage and a threatened coal strike. This condition provided the most favorable habitat for shore birds that we have ever had, as evidenced by the unprecedented species, as well as numbers of individuals, as reported subsequently, particularly from the Central Plateau and Basin and Eastern Ridge and Valley Regions.

Early reports of rareties and the transmission of news of these finds, apparently attracted more observers into the field than is usually the case.

WESTERN COASTAL PLAIN REGION—*Loon-Sparrows:* Common Loon: 15 Oct. (2) HPL (RWM). Horned Grebe: 15 Oct. (4) HPL (RWM), 30 Oct. (2) LW (BC, LC). Double-crested Cormorant: 6 Dec. (1) DR (DM). Anhinga: 1 Nov. (1) HSL (QBD). Common Egret: 26 Nov. to 6 Dec. (2 to 8) DR (DM). Common Goldeneye: 28 Nov. (8) BS (DM). Golden Eagle: 15 Nov. (1) BS (DM), 21 Nov. (1) and 6 Dec. (2) DR (DM). Bald Eagle: 26 Nov. (1) and 6 Dec. (6) DR (DM). Sandhill Crane: 27 Sept. (1) Hoxie, Ark. (HD). Franklin's Gull: 6 Dec. (1) DR (DM). Bonaparte's Gull: 21 Nov. (3) P (DM). Scissor-tailed Flycatcher: 26 Sept. (1) MFS (DB). Tree Swallow: 18 Oct. (500,000) Reelfoot (AS and Memphis Chapter members). Winter Wren: 28 Nov. (1) H (DM). Hermit Thrush: 20 Sept. (1) MFS (HD). Bobolink: 11 Sept. (60) Marion, Ark. (BC, LC). White-throated Sparrow: 4 Oct. (1) Overton Park and (2) Shelby Forest Park.

Locations: BS—Big Sandy Wildlife Refuge, DR—Duck River Wildlife Refuge, H—Observer's Home, HPL—Herb Parsons Lake (Fayette County), HSL—Horseshoe Lake (Crittendon County Arkansas). LW—Lake Wapanocca Wildlife Refuge, Arkansas, MFS—Memphis Area, P—Paris Area.

Observers: DB—David Brown, BC and LC—Ben and Lula Coffee, HD—Henry and Helen Dinkelspiel, QBD—Quentin B. and Frances Dowdy, RWM—Robert W. McGowan, DM—Don and Gina Manning, AS—Dr. and Mrs. Arlo Smith.

David E. Patterson, Harbert Hills Academy, Savannah 38372.

CENTRAL PLATEAU AND BASIN REGION—*Loons-Ducks:* Common Loon: out of season, 11 June (1) OHL (PC). Horned Grebe: late, first being (1) 24 Oct. OHL (MLB, ROH). Pied-billed Grebe: first, 8 Aug. (1) CL (MLB, ROH). Great Blue Heron: mid July to mide Sept. (1-9) ACM (JNR, HR, MLB), otherwise scarce. Green Heron: (1-2) until 25 Sept. LD (RTH), 11 Oct. (1) PPL (MLB) last report. Little Blue Heron: from 8 Aug. (22) down to (1) 18 Sept. ACM (JNR, HR, MLB), 13 Sept. (1) LD (RTH). Common Egret: 26 and 27 Sept. (3) PPL (ROH, MLB), 10 Oct. (8) there (ROH). Black-crowned Night Heron: 2 Aug. (16) BV (MLB), 8 Aug. (26) ACM (JNR, MLB), down to (5) BV 13 Sept. (JNR, MLB). Canada Goose: 27 Sept. (15) PPL (ROH) could have been locally nesting birds, 1 Oct. (18) WB (MSW, VWH). Blue and Snow Geese: 19 Oct. a mixed flock of (2000) BSU, most gone within 3 days (GNB). Gadwall: 13 Oct. (2) LD (RTH), 24 Oct. (2) PPL (ROH, MLB). Pintail: 13 Sept. (2) BV (JNR, MLB), 4 days earliest NA, next 16 Oct. (12) ACM (AT). Green-winged Teal: first, 11 Oct. (1) ACM (MLB). Blue-winged Teal: 27 Sept. (1300+) PPL (ROH, MLB), 28 Sept. (8) LD (RTH), last a late bird, 18 Oct. (1) BV (MLB). American Widgeon: 27 Sept. (3) PPL (ROH, MLB), one day earliest NA. Shoveler: 13 Sept. (2) BV (JNR, MLB), extremely early, then 19 Sept. (3) ACM (JNR, HR). Ring-necked Duck: first, 16 Oct. (18) RL (AT). Lesser Scaup: 19 Oct. (8) RL (LOT). Ruddy Duck: 16 Oct. (1) RL (AT), by 4 days earliest NA. Hooded Merganser: 16 Oct. (2) RL (AT), 12 days earliest NA.

Vultures-Plovers: Turkey Vulture: 15 Aug. (30) ACM (JNR, HR, AT). Black Vulture: 17 Oct. (50) WB (FB). Sharp-shinned Hawk: 11 Aug., 29 Sept., 15 Oct. (1) LD (RTH)* Cooper's Hawk: 25 Sept. and 31 Oct. (1) LD (RTH), 26 Sept. (1) BS (KAG). Red-tailed Hawk: scarcity of reports pathetic! Broad-winged Hawk: unusual NA was (111) in 3 flocks 26 Sept. PPL (ROH, MLB). Bald Eagle: 3 Oct. (1) CHL (FB, MCW)*. Osprey: early was (1) 5 and 6 Sept. GSP (PC), 30 Sept. (1) LD (RTH), several reports NA Sandhill Crane: 17 Oct. (24) Wartburg (Don Todd *fide* RH), none seen BT. Sora Rail: 13 Sept. (1), 23 Sept. (1) both BV, 25 Sept. (1) ACM, all (JNR, MLB). Yellow Rail: 31 Oct. (1), a casualty WSM-TV tower (ARL). American Coot: 1 Aug. (3) PPL (ROH), 2 Aug. (1) BV (JNR), 17 Aug. (1) RL (MCW), 13 thru 30 Oct. to (450) LD (RTH), 31 Oct. (1450) WR (MCW), (450) end of period RL (AT). Semipalmated Plover: 1 Aug. (3) ACM (JNR, HR), 9 Aug. (4) BL (JNR, MLB), 30 Aug. and 6 Sept. (1) ACM (JNR, HL, MLB), 4 Sept. (4) GSP (PC). Killdeer: 8 Aug. (78) BL (MLB, ROH). American Golden Plover: 13 Sept. (2) BV (JNR, HR, MLB), 18 Oct. (1) BV (MLB). Black-bellied Plover: 10 Oct. (1) PPL (ROH).

Sandpipers: Common Snipe: early, 13 Sept. (3) BV (JNR, MLB). Upland Plover: 8 Aug. (5) down to (1) 23 Aug. BL (ROH, MLB, JNR, HR). Spotted: late was (1) 31 Oct. CL (MLB) and (1) WR (MCW, HMc). Solitary: 15 Sept. (1) BV (KAG) last report, 8 Aug. (10) ACM (JNR, HR) was largest number reported. Greater Yellowlegs: 8 Aug. (1) BV (MLB, ROH), was 5 days earliest NA, last 18 Oct. (1) BV (MLB). Lesser Yellowlegs: 2 thru 18 Aug. (4) BL, 23 Aug. thru 19 Sept. (4) ACM, both (JNR, HL), last was (2) CL 24 Oct. (ROH, MLB). Pectoral: (7) thru 19 Sept. ACM (JNR, HR), last 24 Oct. (1) PPL (ROH, MLB). Baird's: 12 thru 23 Sept. (1) ACM (MLB *et.al*). Least: 2 Aug. (3) BV (JNR, HR) to 31 Oct. (5) CL (MLB), seen several locations NA with (15) largest number. Dunlin: 18 Oct. (3) BV (MLB). Dowitcher (species?): 23 and 30 Aug. (2) ACM (JNR, HR). Stilt: 12 Sept. thru 3 Oct. (2-4-1) ACM (TOS, NA), 26 Sept. (6) BL (HEP). Semipalmated: 2 Aug. (6) BV, then 30 Aug. (13) to 19 Sept. (2) ACM, all (JNR, HR). Western: 6 thru 19 Sept. (2-3-1) ACM (JNR, HR, MLB). Buff-breasted: 2 Sept. (1) GSP (PC), 8 and 9 Sept. (1) BL (JNR, HR plus TOS group), then 13 Sept. a remarkable flock of (10) BV (JNR, HR, MLB). Avocet: 4 Sept. (8-10) PPL (Watson Bradley *fide* MLB). Red Phalarope: 26 Sept. (1) PPL (MLB, ROH), second NA record. Wilson's Phalarope: 18 thru 26 Sept. (1) ACM (JNR, HR, MLB *et.al*). 26 Sept. (1) BL (HEP).

Gulls-Flycatchers: Herring Gull: first 24 Oct. (3) OHL (ROH, MLB). Ring-billed Gull: first 24 Oct. (17) OHL (ROH, MLB), 29 Oct. (6) CHL (LOT). Forster's Tern: late, 26 Sept. (8) PPL (ROH, MLB). Caspian Tern: unusual were 3 records NA, 19 Sept. (3) OHL (MLB, WmS), 26 Sept. (3) PPL (ROH, MLB), 11 Oct. (3) ChL (MLB), 20 days latest NA. Black Tern: 23 Aug. (7) OHL (MLB), 26 Sept. (9), 27 Sept. (3) PPL (ROH, MLB), 2 days latest NA. Black-billed Cuckoo: 30 Sept. (1) LD (RTH)*. Owls: almost no reports. Chuck-will's-widow: 30 Aug. (1) singing BT (RH)*. Whip-poor-will: 24 Sept. (1) singing BT (RH), 25 Sept. (1) BS (KAG). Common Nighthawk: 3 Sept. (700), 4 Sept. (675) west NA (MLB), 2 Oct. (1) H (JNR), 7 Oct. (1) WB (FB) last report. Chimney Swift: late was 21 Oct. (200) downtown NA (LOT) Ruby-throated Hummingbird: last report, 18 Oct. (1) H (ARL). Red-headed Woodpecker: 2 and 13 Sept. (2) WSM-TV area (JNR, HR). Yellow-bellied Sapsucker: first, 20 Sept. (1) BT (RH), 28 Sept. (1) cas. WSM-TV (ARL), 1 Oct. (3) WB (FB). Eastern Kingbird: last report, 26 Sept. (1) RL (JNR, HR). Great Crested Flycatcher: late, 27 Sept. (1) H (LOT). Yellow-bellied Flycatcher: 5 Sept. (1) banded WSM-TV (JNR, HR). Least Flycatcher: 7 Sept. (1) banded BS (KAG)* Wood Pewee: late, 14 Oct. (1) LD (RTH), 17 Oct. (1) AL (GRM), 25 Oct. (1) banded BS (KAG), 2 days latest NA. Olive-sided Flycatcher: 29 Sept. (1) WB (FB) 9 days later than NA record.

Swallows-Vireos: Tree Swallow: 26 Sept. (7) FV (JOE)* Rough-winged Swallow: 11 Oct. (4) ACM (MLB), ties NA late date. Barn Swallow: 8 Aug. (72) ACM (JNR, HR) shows normal migration time NA, 24 Oct. (1) PPL (ROH) is 3 days latest NA. Cliff Swallow: 1 Aug. (100) ChL (JNR, HR), 23 Aug. (2) ACM (JNR) last report. Purple Martin: 23 Aug. (350) NA (MLB), last 26 Sept. (2) PPL (ROH, MLB). Brown Creeper: early, 11 Oct. (1) RL (MLB), first BT (1) 27 Oct. (RH). House Wren: 2 Aug. (1) H carrying nesting material (MD), 3 Oct. (3) banded WSM-TV (JNR, HR), last NA 8 Oct. (1) H (MLB), 13, 21 Oct. (1) H WB (FB). Winter Wren: early, 1 Oct. (1) banded BS (KAG), Bewick's Wren: 29 Sept. (1) banded H (HR)*. Long-billed Marsh Wren: 28 Sept. (21) casualties WSM-TV (ARL)! Then 2 Nov. (1) there, 1 days latest NA. Swainson's Thrush from 10 Sept. (1) H (SB) to 20 Oct. (1) RL (AT) Gray-cheeked Thrush: from 14 Sept. (1) H (SB) to 11 Oct. (1) CHL (GRM). Veery: from 6 Sept. (1) banded

BS (KAG) to 4 Oct. (1) WB (FB). Eastern Bluebird: 10 Oct. an unusual flock of (67) SHV (KAG, JCO), down to (18) 22 Oct. (KAG), (3-18) daily in Oct. LD (RTH). Golden-crowned Kinglet: early, 4 Oct. (7) WB (FB). Ruby-crowned Kinglet: 11 Sept. (1) MBP (AC) ties earliest NA record, then 13 Sept. (1) H (AT). Water Pipit: very early, 13 Sept. (50) NA (LOT). Cedar Waxwing: 30 Sept. (3) RL (MLB), 20 Oct. (16) BT (RH), 11-31 Oct. (15-85) LD (RTH). Red-eyed Vireo: late was (1) 18 Oct. H (CWF).

Warblers: Prothonotary: late, 26 Sept. (2) RL (JNR, HR). Swainson's: 28 Sept. (2) WSM-TV (ARL), first NA casualties. Worm-eating: also late, 26 Sept. (1) RL (JNR, HR). Brewster's (Hybrid): 7 Sept. (1) banded BS (KAG). Tennessee: very early was (1) window casualty BT (RH), 3 Sept. (1) WB (FB), 6 Sept. (1) H (CWF) and (3) BS (KAG), late was last report, 31 Oct. (1) H (MLB). Nashville: early was (1) banded 6 Sept. WSM-TV (JNR, HR), and (1) WB (FB), then last were (1) banded CW (JNR, HR) 18 Oct. and (1) RL (MLB). Parula: last 3 Oct. (2) WB (FB). Magnolia: early, 3 Sept. (3) WB (FB), late, 21 Oct. (1) H (HR). Myrtle: very early, 19 Sept. (1) WB (MCW), then 26 Sept. (2) RL (JNR, HR). Black-throated Green: observers feel there were far more than the past few years. From 6 Sept. (3) BS (KAG, MLB)) to 30 Oct. (1) H Columbia (DG). Blackburnian: from 4 Sept. (1) WB (FB) to 18 Oct. (1) RL (MLB). Chestnut-sided: from 6 Sept. (2) WB (FB) and (1) BS (KAG, MLB) to 15 Oct. (1) H (HR). Palm: from 27 Sept. (1) banded WSM-TV (JHR, HR) to 22 Oct. (5) WB (FB) and 24 Oct. (1) CL (MLB). Ovenbird: 28 Sept. (625) casualties WSM-TV (ARL), then late was (1) 16 Oct. WB (FB). Connecticut: 17 Sept. (1) H (CWF). Mourning: 4 Sept. (1) banded BS (KAG), 13 Oct. (1) H WB (FB). Yellowthroat: 1 Aug. (18) ACM (JNR, HR), last 13 Oct. (1) WB (FB). Wilson's: from 28 Aug. (2) WB (FB) to 17 Oct. (1) AL (GRM) and 18 Oct. (1) H (RE). Canada: 16 Aug. (1) banded BS (KAG), 1 day earliest NA, to 26 Sept. (1) RL (JNR, HR).

Bobolinks-Sparrows: Bobolink 28 Sept. (1) tower cas. WB (FB)*. Orchard Oriole: last report, 12 Aug. (5) (KAG, MLB). Baltimore Oriole: last, 12 Sept. (2) BS (MG). Rusty Blackbird: 16 Oct. (1) H (AT), 4 days earliest NA, 17 Oct. (3) PPL (ROH). Scarlet Tanager: 15 Aug. (1) banded BS (KAG), (1-5) imma. until 20 Oct. BT (RH), 9 to 23 Oct. (4) WB (FB). Summer Tanager: last report, 16 Oct. (2) H (AT). Western Tanager: 21 Oct. (1) H WB (FB) (3rd report for the State, but each a hypothetical record as but one observer each time). Rose-breasted Grosbeak: from 15 Sept. (2) BT (RH) to 22 Oct. (1) WB (FB). Largest numbers were (22) 26 Sept. to a peak of (190) 29 Sept., then down to (21) 2 Oct. WB (MCW). Blue Grosbeak: 12 Aug. (8) SHV (KAG), (7) during Aug., Sept. WB (FB). Savannah Sparrow: early, 7 Sept. (2) RH (SB), 12 Sept. (1) ACM (MLB). Vesper Sparrow: early, 15 Oct. (2) WB (FB), (3) there (MCW). Lark Sparrow: 23 Aug. (1) ACM (JNR)*. Slate-colored Junco: early, 1 Oct. (10) WB (MCW), first NA 17 Oct. (1) BS (KAG). White-crowned Sparrow: first 7 Oct. (2) WB (FB), 18 Oct. (12) OHL (PC) and (2) BV (MLB). White-throated Sparrow: first 1 Oct. (1) BS (KAG), 16 Oct. CV by both (RTH, TT), 18 Oct. (4) BT (RH). Fox Sparrow: 29 Oct. (1) H (AT)*. Lincoln's Sparrow: 11 Oct. (1) BS (KAG), 17 Oct. (1) AL (GRM). Swamp Sparrow: first, 4 Oct.

(9) BV (MLB). Song Sparrow: 14 Aug. (1) McMinnville, then late NA (1) 22 Oct. BS (KAG), 13 Oct. (1) LD (RTH).

NOTE—* the asterisk is to denote that only one report for the species was received by the writer.

Locations: ACM—Ashland City Marsh, AL—Arrow Lake, BL—Bush Lake, BS—Basin Springs, BSU—Big Sandy Unit, Tenn. Nat'l. Wildlife Refuge, BT—Byrdstown, BV—Buena Vista Marsh, CL—Coleman's Lake, CHL—Center Hill Lake, ChL Cheatham Lake, CW—Cheekwood, CV—Cookville, FV—Fernvale, GSP—Gallatin Steam Plant, upper OHL, H—home area, LD—Lillydale, upper Dale Hollow Lake, MBP—Montgomery Bell Park, NA—a 25 mile radius Nashville, OHL—Old Hickory Lake, PPL—Percy Priest Lake, RH—Rabbit Hill, RL—Radnor Lake, SHV—South Harpeth Valley, TOS—Tennessee Ornithological Society, WB—Woodbury, WR—Woods Reservoir, WSM-TV—TV tower and nearby area.

Observers: SB—Sue Bell, MLB—Mike L. Bierly, GNB—Gary N. Burke, FB—Frances Bryson, PC—Paul Crawford, AC—Annella Creech, MD—Milbrey Dugger, RE—Roy Elliott III, JOE—John O. Ellis, CWF—Clara W. Fentress, MG—Mel Garlan, DG—Dan Gray, Jr., KAG—Katherine A. Goodpasture, ROH—Roger O Harshaw, RH—Robbie Hassler, RTH—Roy T. Hinds, VWH—Mrs. W. S. Hite, ARL—Amelia R. Laskey, GRM—George R. Mayfield, Jr., HMc—Henrietta McCrary, JCO—John C. Ogden, JNR, HR—John and Heather Riggins, Wm—William Senter, AT—Ann Tarbell, TT—Thelma Tinnin, LOT—Laurence O. Trabue, MCW—Mary C. Wood.

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EASTERN RIDGE AND VALLEY REGION—*Grebes-Pheasant:* Pied-billed Grebe: first, 24 Aug. (1) K (FJA, JMC, RME, CAM, GW). Little Blue Heron: 1 to 31 Aug. (1 to 7) HRA (KD). Cattle Egret: 8 Oct. (1) LC (KD). Common Egret: 1 Aug. to 26 Oct. (1 to 35) HRA (KD), 16 Aug. (4) CC (JMC, JCH). Louisiana Heron: 10 to 24 Aug. (1) HRA (KD, LD, JMC, LS). Black-crowned Night Heron: 12 Aug. (2) K (GB, JB, JMC). Yellow-crowned Night Heron: 4 Aug. (2) M (JMC, CAM, EM, GW). American Bittern: 16 Sept. (1) AM (KD). Canada Goose: first, 28 Sept. (17) HRA (WiC). Snow Goose: max. 25 Oct. (5) HRA (COS, KOS). Blue Goose: max. 26 Oct. (27) HRA (KD). Mallard: first, 9 Aug. (6) K (JMC, GW). Black Duck: first, 9 Aug. (6) K (JMC, GW). Sharp-shinned Hawk: 26 Aug. (1) SB (KD), 24 Sept. (1) Da (LS). Cooper's Hawk: 18 Aug. (1) Ja (LS), 12 Sept. (1) CC (JMC, JCH), 19 Oct. (1) HRA (KD). Marsh Hawk: first, 28 Sept. (1) SeV (LS). Osprey: 1 Aug. thru 25 Oct. (1) HRA (WiC). Ring-necked Pheasant: 18 Oct. (5) JC (PGR).

Plovers-Sandpipers: Semi-palmated Plover: first, 10 Aug. (10) CL (JMC, JCH). Piping Plover: 4 Sept. (2) SB (KD). American Golden Plover: 7 Sept. (1) K (JMC), 19 Oct. (3) SB (KD). Black-bellied Plover: 12 Aug. (2) K (GB, JB, JMC, JE), 17 Sept. (1) KSP (FJA, JMC, CAM, JBO), 12 Oct. (1) HRA (KD, TF). Ruddy Turnstone: 10 Sept. (1) KSP (BB), 16 Sept. (1) K (JMC, JCH). American Woodcock: 3 Aug. (1) HRA (KD), 10 Sept. (1) JC (PGR). Upland Plover: 8 Aug. (1) K (GB, JB), 24 Aug. (1) K (FJA, JMC, RME, CAM, GW). Willet: 10 Aug. (3) K (GB, JB, JMC, JCH, CAM, GW). Greater Yellowlegs: last, 26 Oct. (1) HRA (KD). White-rumped Sandpiper: 30 Aug. (2) and 11 Sept. (6) ChL (TK), 31 Aug. (2) HRA (KD), 25 Oct. (1) HRA (BB, JMC, TK, JTT, COS, KOS). Dunlin: 11 Oct. (2) HRA (KD), 14 Oct. (4) K (CAM, EM), max. 26 Oct. (100) HRA & SB (KD). Short-billed Dowitcher: 23 thru 24 Aug. (1) K (JMC, KOS). Dowitcher (species?) 31 Aug. (1) HRA (KD), 1 Sept. (1) HRA (KD), 4 Sept. (6) SB & HRA (KD), 5 Sept. (5) SB (LS). Stilt Sandpiper: 9 Aug. (2) CL (JMC, JCH), 16 Aug. (1) K (GB, JB, JMC, RME), 19 Aug. (1) HRA (JMC, GW), 23 Aug. (2) K (JMC, RME, EF, BL, LN, MS, GW, BW, IW), 24 Aug. (9) HRA (KD), 31 Aug. (2) HRA (KD), 4 Sept. (6) K (FJA), 10 Sept. (4) KSP (FJA, JMC), 16 Sept. (1) K (JMC, JCH). Western Sandpiper: 20 Aug. (2) HRA (LS), 23 Aug. (2) SB (KD), 26 Aug. (1) HRA (FJA, JMC), 27 Aug. (1) K (GB, JB), 31 Aug. (2) HRA (KD), 10 Sept. (1) KSP (FJA, BB, JMC), 16 Sept. (4) K (JMC). Buff-breasted Sandpiper: 30 Aug. to 10 Sept. (1 to 7) K (JMC, KOS), 10 Sept. (1) KSP (BB), 13 Sept. (1) KSP (FJA, JMC). Marbled Godwit: 2 to 6 Sept. (1) SB (KD, LS). Sanderling: 24 Aug. (1) HRA (KD), 10 Sept. (9) KSP (FJA, BB, JMC), 13 Sept. (5) KSP (FJA, JMC), 17 Sept. (1) KSP (FJA, JMC, CAM, JBO) 19 Sept. (4) BRSP (JMC). American Avocet: 5 Sept. (1) K (JMC, KOS). Red Phalarope: 20 Sept. (1) CL (JMC, JCH, CAM, NS, PS), 21 Sept. (1) CL (FJA, JBO, PP). Wilson's Phalarope: 18 and 24 Aug. (2) HRA (KD), 19 Aug. (2) HRA (JMC, GW), 1 Sept. (1) K (FJA, KOS).

Terns-Warblers: Forster's Tern: 12 Sept. (3) K (FJA, CAM). Common Tern: first, 6 Sept. (1) SB (KD), max. 27 Sept. (150) K (KOS). Least Tern: 5 Sept. (1) K (JMC, KOS). Black Tern: first, 10 Aug. (1) K (GB, JB, JMC, JCH, CAM, EM, GW). Barn Owl: thru period (1) AM (KD), 9 Sept. (1) Da (LS). Barred Owl: 31 Oct. (1) NL (LS). Common Nighthawk: max., 5 Sept. (600) K (FJA, JMC). Yellow-bellied Flycatcher: 21 Sept. (1) JC (PGR). Olive-sided Flycatcher: 20 Sept. (1) CC (JB, JMC, JCH, CAM, NS, PS), 21 Sept. (1) D (KD). House Wren: to 14 Aug. (2 adults, nest and 3 young) K (JS, LS). Short-billed Marsh Wren: 4 Aug. (2) M (JMC, CAM, EM, GW), 4 to 26 Aug. (1 to 4) SB (KD). Philadelphia Vireo: 3 Oct. (1) K (JMC, CAM, EM), 4 Oct. (1) K (FJA, CM), 4 Oct. (1) CC (JMC, JCH). Black-throated Blue Warbler: 12 Sept. (1) CC (JMC, JCH). Blackburnian Warbler: first, 12 Sept. (5) CC (JMC, JCH).

Locations: AM—Amnicola Marsh, BRSP—Bull Run Steam Plant, CC—Campbell County, ChL—Cherokee Lake, CL—Cove Lake, D—Dunlap, Tenn., DA—Daus, Tenn., HRA—Hiwassee River Area, JA—Jasper, Tenn., JC—Johnson City, K—Knoxville, KSP—Kingston Steam Plant, LC—Lookout Creek (near Chattanooga), M—Maryville, Tenn., NL—Nickajack Lake, SB—Savannah Bay, SeV—Sequatchie Valley.

Observers: FJA—Fred Alsop, BB—Benton Basham, GB—Gilbert Banner, JB—Joshua Banner, JMC—James M. Campbell, WiC—Wilford Caraway, COS—Chattanooga Chapter TOS, KD—Kenneth Dubke, LD—Lil (Mrs. Kenneth) Dubke, JE—John Elson, RME—Ray M. (Danny) Ellis, EF—Elizabeth French, TF—Tom Finucane, JCH—Joseph C. Howell, TK—Tony Koella, KOS—Knoxville Chapter TOS, BL—Beth Lacy, CAM—Chester A. Massey, EM—Eleanor (Mrs. Chester) Massey, LN—Louise Nunnally, JBO— J. B. Owen, PP—Paul Pardue, PGR—Peter G. Range, LS—Lee Shafer, MS—Mabel (Mrs.

Kenneth) Sanders, JS—Johneta (Mrs. Louis) Smith, LS—Louis Smith, NS—Nancy (Mrs. Phil) Sollins, PS—Phil Sollins, JTT—James T. Tanner, GW—Gary Wallace, BW—Bill Williams, IW—Irene (Mrs. Bill) Williams.

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EASTERN MOUNTAIN REGION—*Ducks-Hawks:* Shoveler: 4 Oct. (3) WiL (RM). Wood Duck: 10 Oct. (9) SHD (BR). Ring-necked Duck: 5 Oct. (3) WiL (GE). Lesser Scaup: 18 Oct. (1) WiL (LRH). Bufflehead: present all summer (2) WiL (LRH, *et.al.*). Turkey Vulture: max. 20 Sept. (13) LRF (FJA). Black Vulture: max. 20 Sept. (7) LRF (FJA). Sharp-shinned Hawk: 25 Oct. (1) SHD (BR). Cooper's Hawk: 20 Oct. (2) SHD (BR). Red-tailed Hawk: 20 Sept. (2) LRE (FJA). Broad-winged Hawk: 20 Sept. (48) LRF (FJA), 9 Sept. (14) HC (MS). Marsh Hawk: 20 Sept. (1) LRF (FJA), 23 Aug. (1) HC (MS). Osprey: 20 Sept. (2) LRF (FJA), 4 Oct. (1) SHD (BR, WC, PD).

Snipe-Veery: Common Snipe: 4 Oct. (1) E (GE). Solitary Sandpiper: 5 Sept. (1) RM (KD). Least Sandpiper: 7 Sept. (4) RC (PGR). Sanderling: 4 Oct. (1) RC (LRH, PGR, JM). Caspian Tern: 7 Oct. (7) RC (PGR). Yellow-billed Cuckoo: 5 Oct. (1) NG (FJA, DJA, CM). Chimney Swift: last 5 Oct. (4) NG (FJA, DJA, CM). Yellow-bellied Sapsucker: 4 Oct. (1) SHD (BR). Tree Swallow: 20 Sept. (2) LRF (FJA). Bank Swallow: 13 Aug. (6) SV (WC, BR, WB, JJ). Rough-winged Swallow: 20 Sept. (1) LRF (FJA). Purple Martin: last 5 Sept. (2) RM (CRS). Raven: 5 Oct. (1) NG (FJA, DJA, CM). Bewick's Wren: banded, 8 Sept. (1) EGC (LRH). Veery: 6 Sept. (5) RM (BR, *et.al.*).

Vireo-Sparrow: Solitary Vireo: 5 Oct. (5) NG (FJA, DJA, CM). Black-and-white Warbler: 5 Oct. (2) NG (FJA, DJA, CM). Tennessee Warbler: 5 Oct. (9) NG (FJA, DJA, CM). Cape May Warbler: 5 Oct. (2) NG (FJA, DJA, CM). Black-throated Green Warbler: 5 Oct. (8) NG (FJA, DJA, CM). Chestnut-sided Warbler: 5 Oct. (3) NG (FJA, DJA, CM). Bay-breasted Warbler: 5 Oct. (5) NG (FJA, DJA, CM). Blackpoll Warbler: 5 Oct. (3) NG (FJA, DJA, CM). American Redstart: 5 Oct. (8) NG (FJA, DJA, CM). Boblink: 23 Sept. (2) HC (MS), Rusty Blackbird: 20 Oct. (15) RM (FWB). Purple Finch: banded 20 Sept. (1) EGC (LRH). Bachman's Sparrow: banded 25 Sept. (1) EGC (LRH).

Locations: E—Elizabethton, EGC—Elizabethton Golf Course, HC—Heaton Creek (near Roan Mountain), LRF—Look Rock Firetower (Blount County), NG—Newfound Gap, Great Smoky Mountain National Park), RC—Roan Creek, RM—Roan Mountain, SV—Shady Valley (Johnson County), SHR—South Holston River just below dam, SHL—South Holston Lake, WiL—Wilber Lake.

Observers: DJA—Delores Jean Alsop, FJA—Fred J. Alsop, III, FWB—Fred W. Behrend, WB—Woody Boyd, WC—Wallace Coffey, PD—Pat Doyle, KD—Kenneth Dubke, GE—Glen Eller, LRH—Lee R. Herndon, JJ—Joey Jackson, JM—John Martin, CM—Chester Massey, RM—Robie May, PGR—Peter G. Range, BR—Brent Rowell, CRS—Charles R. Smith, MS—Maxie Swindell.

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